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## Associate in Arts & Associate in Science Degree Graduation Requirements

Requirements for the associate in arts (A.A.) and associate in science (A.S.) degrees include completion of all the following:

- A minimum of 90 units in a defined set of courses;
- A minimum of 18 units successfully completed at Foothill College;
- A grade of C or better in all core and support courses used for the degree;
- A minimum GPA of 2.0 across all college courses including Foothill courses;
- A major or area of emphasis of at least 27 units in a curriculum approved by the Foothill College Curriculum Committee;
- The general education requirements are listed on pages 71–72. If you plan to transfer to a four-year college or university, you should also review the specific requirements of those institutions;
- English Proficiency: ENGL 1A or 1AH or 1S and 1T;
- Math Proficiency: MATH 17 or 105 or 108 or 180; and
- The student may apply only one English or ESLL course below transferable freshman composition toward the associate degree.

Note that completion of the IGETC or CSU GE Breadth pattern may also be used to satisfy the general education requirements for the Foothill A.A./A.S. degree. Because there are significant differences between the three patterns, you are strongly advised to meet early and often with a counselor to determine which pattern will best meet your goals.

### General Education Reciprocity

The Foothill-De Anza Community College District has entered into a mutual General Education (GE) Reciprocity Agreement with other community colleges to accept the general education courses of these colleges “as completed.” In addition to Foothill, participating institutions include Chabot, De Anza, Evergreen Valley, Gavilan, Las Positas, Mission, Ohlone, San Jose City and West Valley colleges.

The reciprocity agreement allows students who obtain a certification of completion of associate degree GE requirements at one of the participating colleges to transfer both the GE coursework and graduation proficiencies to any of the other participating colleges.

Additional GE coursework will not be required if the official certification is presented. Students will still be required to complete all courses or prerequisites needed for a major. The agreement also means that the other participating colleges will accept the Foothill GE pattern when presented with official certification.

In addition to the General Education Reciprocity Agreement, Foothill College will exempt students who have already earned an associate degree from another California community college or who submit general education certification from another California community college (other than the nine colleges previously identified) from having to complete any additional general education or additional English/mathematics proficiency coursework to earn the Foothill A.A./A.S. Local general education requirements may also be met by completion of the IGETC or CSU General Education Breadth Requirements. For more information, schedule an appointment with a counselor.

Students seeking an official general education certification for use by a reciprocity institution are encouraged to review their records with a counselor prior to submitting the General Education Certification Request. Students who have completed courses at other colleges and universities must have official transcripts on file prior to submitting the request. Requests for A.A./A.S. general education certification may be submitted to the Evaluations Office in Room 8101.

### Petition for Graduation

Upon completion of required coursework, you may request to receive an associate degree (A.A./A.A.-T/A.S./A.S.-T) from Foothill College. You must complete a 30-minute appointment with a Foothill counselor in order to verify applicable requirements and complete the graduation petition. Please note that any applicable coursework from other schools, in the form of official transcripts, must be on file at Foothill College at the time of completing the graduation petition. The petition must be filed the quarter during which the degree will be completed, by the applicable deadline for that quarter. For deadline information, visit [foothill.edu/counseling/petition](http://foothill.edu/counseling/petition). Foothill confers degrees every quarter, and the annual commencement ceremony is presented in June. For more information, schedule a consultation with a counselor by visiting [foothill.edu/counseling](http://foothill.edu/counseling).

### Catalog Rights/Requirements for Graduation

The Course Catalog serves as an agreement between the student and the college to identify courses that the student must complete in order to qualify for a degree or certificate. The student has the right to select the course requirements for a degree or certificate from any catalog as long as continuous enrollment has been maintained.

Allied health programs reserve the right to change catalog rights by modifying program requirements based upon state and federal accreditation standards.



### Continuous Enrollment

Continuous enrollment is important in deciding which catalog a student may select to determine degree or certificate requirements. A continuously enrolled student is defined as one who attended Foothill or De Anza colleges at least two quarters each academic year, excluding summer session. A single W-mark in a term qualifies as an attended term.

### Currency of Major/Certificate Requirements

In certain Foothill College programs, currency of course content is essential. The Foothill College Curriculum Committee reserves the right to determine an acceptable level of currency of any course in any major or certificate. This means that a course may only be used toward fulfilling a certificate or degree for a prescribed number of years. Students should check certificate and major requirements for courses that are noted as having currency levels.

### Online Degrees

The Foothill Online Learning Program offers online educational opportunities and services comparable to those available to on-site students. The program offers students a variety of online learning courses that meet the same high academic standards as traditional classes.

The program also offers several associate degree programs entirely online, including accounting, anthropology, art history, economics, general studies/social science, graphic and interactive design, history, humanities, music general, music technology, psychology, sociology and women's studies, as well as general education requirements. These degrees are fully transferable. A few courses, such as communication, English and math, may require occasional meetings or proctored exams.

Foothill College may be required to receive state authorization to enroll students who do not reside in California. Many states have either given the college this authorization or do not require authorization. However, some states require significant fees to receive state authorization. Due to the significant and/or recurring fees for state authorization, Foothill College no longer permits a student to enroll if he/she resides in any of the following states: Alabama, Arkansas, Georgia, Maryland, Michigan, Minnesota or Wisconsin. For more information, visit [foothill.edu/onlinelearning](http://foothill.edu/onlinelearning).

### Discontinued Degrees

A discontinued degree is one that was once offered by Foothill College but which is no longer offered. To be considered for an associate degree in a discontinued program, the student who has maintained continuous enrollment may file to graduate from Foothill College within seven years of the time that a program is discontinued.

### Non-Transcriptable Certificates

Per Title 5 regulations, certificates of achievement are

noted on the student's transcript. However, certificates of career, competency, completion, proficiency, specialization, and skills are not reflected on the student's transcript.

### Course Numbering System

Most Foothill courses are baccalaureate in level and can be transferred to four-year institutions. For complete course numbering guidelines, refer to page 132.

### Certification of General Education for Transfer

Foothill College will certify completion of up to 58 units of the 72-unit general education requirement for graduation from the CSU (page 74). IGETC Certification for CSU or UC requires full certification of Areas 1 through 5 (page 73). You may request certification by completing the official certification form or transcript request form available from the Admissions & Records Office in Room 8101 or Evaluations Office in Room 8301.

We encourage all students to consult with a counselor each quarter for new course requirements, and for help in selecting courses.

## Four-Year Institution Requirements

### Articulation Agreements

Articulation is the process of negotiating and approving Foothill courses with other institutions. Foothill has course-to-course and major-preparation articulation agreements with every UC and most CSU campuses, as well as many four-year colleges and universities. This information is available to you through your counselor or via the internet. To review online information, visit these websites:

- [foothill.edu](http://foothill.edu)
- [assist.org](http://assist.org)
- Website of the specific college of interest

### Assist Web Page

As the official statewide repository for articulation information, Assist ([assist.org](http://assist.org)) is the primary site for students to find specific Foothill College courses that fulfill general education and/or major preparation requirements at UC and CSU campuses. Listings of course equivalencies assist students in selecting appropriate courses to prepare for transfer. Information about exploring majors, selection criteria for impacted and selective programs/majors, transfer credit limitations and important links to UC and CSU websites are also available at [assist.org](http://assist.org). Although Assist is an excellent tool, it is recommended that students apply Assist information to their education plan in conjunction with a Foothill counselor.

### Transfer Admission Guarantees

If you complete a Transfer Admission Guarantee (TAG), you'll receive first consideration for admission to selected

colleges and universities. You must complete agreed-upon general education courses, as well as major courses, with a specified minimum grade-point average. Consult with a counselor to develop a TAG. The TAG must be prepared before transfer. The TAG ensures acceptance and smooth transfer to the chosen college or university. The Transfer Center, Room 8329, has additional information regarding deadlines for TAGs.

The following institutions offer Transfer Admission Guarantees for Foothill students:

- A number of Historically Black Colleges and Universities (HBCUs), including Grambling and Tuskegee\*
- Arizona State University
- California State University System\*\*
- Cogswell College
- Golden Gate University
- Menlo College
- Notre Dame de Namur University
- Palo Alto University
- UC Davis
- UC Irvine
- UC Merced
- UC Riverside
- UC Santa Barbara
- UC Santa Cruz
- University of the Pacific
- Western Oregon University

\* For a complete list of participating HBCUs, visit [extranet.cccco.edu/HBCUTransfer.aspx](http://extranet.cccco.edu/HBCUTransfer.aspx)

\*\*Applies to associate degrees for transfer.

Verify current TAG availability in the Transfer Center. Additional transfer agreements are available through the Foothill Honors Institute, including the Transfer Alliance Program with the UCLA. To verify current honors agreements, visit the Honors Institute (Room 1961).

Students who complete the Foothill Honors program are eligible for participation in special transfer programs at more than thirty colleges and universities through the Honors Transfer Council of California, including the UCLA Transfer Admission Program (TAP) and the UC Irvine Honors to Honors program. Complete information is available at [htcca.org/transfer-partners](http://htcca.org/transfer-partners)

### Course Identification Numbering System

The Course Identification Numbering System (C-ID) is a statewide numbering system independent from the course numbers assigned by local California community colleges. C-ID approval signals that participating California colleges and universities have determined that courses offered by other California community colleges are comparable in content and scope to courses offered on their own campuses, regardless of their unique titles or local course number. Students should always review [assist.org](http://assist.org) to confirm

how each college's course will be accepted at a particular four-year college or university for transfer credit.

The C-ID numbering system is useful for the student who is attending more than one community college and is applied to many of the transferable courses the student will need as preparation for transfer. Because these course requirements may change or be modified and qualified for or deleted from the C-ID database, the student should always check with a counselor to determine how C-ID-designated courses fit into his/her educational plans for transfer.

The student may consult the Assist database at [assist.org](http://assist.org) for specific information on C-ID course designations. For assistance interpreting or explaining this information, schedule an appointment with a counselor.

### University of California (UC) Breadth General Education Requirements

The UC has campuses at Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, San Francisco, Santa Barbara and Santa Cruz.

UC campuses have uniform basic eligibility requirements. Each campus is distinct, however, and not all majors are offered at every campus. Each school and college at a specific UC campus has outlined major requirements that prepare you for the academic discipline.

Foothill's counselors and Transfer Center staff can advise you regarding the courses acceptable for credit at UC campuses, as well as those that meet the breadth requirements for specific UC colleges and schools. You can also review this information at [assist.org](http://assist.org). The Foothill College website at [foothill.edu](http://foothill.edu) includes the Transfer Course Agreement Listing for all Foothill courses that are transferable to all UC campuses. You should explore all undergraduate colleges, schools and majors to determine which campuses will best satisfy your educational needs. We encourage you to discuss the advantages of each major and campus with a counselor.

### Preparation for Transfer to Four-Year Colleges & Universities

Each year, hundreds of Foothill College students transfer to four-year colleges or universities after completing lower-division major preparatory and general education requirements. The secret of our students' success is that they understand which courses are required for the following three transfer elements:

- Minimum admission eligibility/requirements;
- Requirements in preparation for the identified major; and
- Completion of general education/breadth requirements.
- Depending upon the transfer institution, the requirements may differ.

Counselors are an excellent resource for transfer information. Understanding the minimum requirements ensures that students can transfer in a timely manner to earn their bachelor's degree without delay.

These requirements are subject to change annually; therefore, the student should meet with a counselor every year. Many of the courses offered at Foothill College are similar to courses offered in the lower division, or first two years, at four-year colleges and universities. Because there is a wide variation between requirements at different universities, it is recommended that you decide on your major and transfer institution as soon as possible. In addition to offering counselors to help you with this decision, Foothill College offers counseling (CNSL) and Career Life Planning (CRLP) courses to help you explore and evaluate options.

### **Transfer to the California State University (CSU)**

For students interested in transfer to one of the 23 campuses of the CSU, admission eligibility is based on transferable units completed. You are considered a transfer student if you complete college units after the summer following graduation from high school. Admission offices at the 23 CSU campuses use a common set of factors to make admission decisions for both classes of transfer students. All campuses have higher standards for out-of-state students and international students. Some campuses have higher standards for particular majors. Finally, some campuses have higher standards for all applicants. Some campuses give preference in admission to students who reside or have completed an identified number of units at institutions in their local area. For detailed information, visit [calstate.edu/apply](http://calstate.edu/apply).

### **Associate Degrees for Transfer to the CSU System**

The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an associate degree for transfer, which is a newly established variation of the associate degree traditionally awarded by the California Community Colleges. The associate in arts for transfer (A.A.-T.) and associate in science for transfer (A.S.-T.) degrees are intended for students who plan to complete a bachelor's degree in a similar major at a CSU campus. Students completing the A.A.-T. or A.S.-T. degree program are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn an A.A.-T. or A.S.-T. degree, students must complete a minimum of 90 required quarter units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus in a major that accepts the A.A.-T. or A.S.-T. degree will be required to complete no more than 60 semester/90 quarter units after transfer to earn the bachelor's degree (unless the major is a designated to be a high-unit major). Note: The A.A.-T. or A.S.-T. degree may not be the best option for students who intend to transfer to a particular CSU campus or to

university or college that is not part of the CSU system. Students who plan to complete the A.A.-T. or A.S.-T. degree are strongly encouraged to meet early and often with a counselor for more information on university admission and transfer requirements. Consult a counselor for more information.

### **Lower-Division Transfer Admission**

Many CSU campuses do not accept lower-division transfers. Be sure to check with the campus if you are considering transfer as a lower-division student. Students who have completed fewer than 60 transferable semester units (90 quarter units) are considered lower-division transfer students. You are eligible for admissions consideration as a lower-division transfer if you:

- Have a college grade-point average of 2.0 or better in all transferable college units completed;
- Are in good standing at the last college or university attended; i.e., you are eligible to re-enroll;
- Meet the admission requirements for a first-time freshman or have successfully completed the necessary courses to make up the deficiencies you had in high school if you did not complete the 15-unit pattern of college preparatory subjects; and
- Meet the eligibility index required of a freshman.

### **Upper-Division Transfer Admission**

Students who have completed 60 or more transferable semester units (90 quarter units) are considered upper-division transfer students. You are eligible for admission if you:

- Have an overall college grade-point average of 2.0 or better (2.4 for California nonresidents) in all transferable college units attempted;
- Are in good standing at the last college or university attended; i.e., you are eligible to re-enroll; and
- Prior to transfer, you complete at least 30 semester units (45 quarter units) of general education coursework with a grade of C or better. The 30 (45) units must include all of the general education requirements in English composition, oral communication, critical thinking and at least one course of 3 semester units (4 quarter units) in college-level mathematics.

### **Major Requirements**

Students are encouraged to complete as many lower-division major preparatory requirements as possible prior to transfer. Many majors, especially in highly selective programs, have supplemental requirements that must be met prior to transfer. Consult with a counselor for additional information. These requirements may also be viewed at [assist.org](http://assist.org). Some oversubscribed programs may require supplemental courses or information for admission.

## Transfer to the University of California (UC)

The UC campuses at Berkeley, Davis, Irvine, Los Angeles, Merced, Riverside, San Diego, Santa Barbara and Santa Cruz all share the same minimum admission requirements; however, each campus is unique. The academic programs offered, the size of the student body and the location are just a few of the factors that contribute to the individual character of each campus. Entrance requirements may vary as well. Although some campuses are able to admit all eligible transfer applicants, others can accommodate only a limited number of transfer students. Academic preparation and grade-point average (GPA) are used by the competitive campuses and programs in the selection process. Criteria vary from year to year and from campus to campus according to the number and qualifications of applicants to each campus and program. For more information about campuses, consult the university general catalogs available online or in the Foothill College Transfer Center (Room 8329). Complete information on the UC may be found at [admission.universityofcalifornia.edu](http://admission.universityofcalifornia.edu).

The UC will award graduation credit for up to 105 lower-division quarter units of transferable coursework from a community college. Courses in excess of 105 quarter units will receive subject credit and may be used to satisfy university subject requirements. There is no limit, however, on the number of units used to determine a student's GPA, so all UC-transferable units will apply.

### Minimum Admission Requirements for Transfer Applicants Who Are California Residents

The UC considers you a transfer applicant if you enrolled in a regular session at a college or university after high school, not including summer session. (You can't disregard your college record and apply as a freshman.) There are three ways to meet the university's minimum admission requirements for transfer students. The path you use depends on the degree to which you satisfied UC's minimum eligibility requirements for freshmen at the time you graduated from high school.

- If you were eligible for admission to the university when you graduated from high school—meaning you satisfied the subject, scholarship and examination requirements, or were identified by the university during your senior year in high school as eligible in the local context—you are eligible to transfer if you have a 2.0 GPA in your transferable college coursework.
- If you met the scholarship requirements in high school but did not satisfy the 15-course subject requirement, you must take transferable college courses in the missing subjects, earn a grade of **C** or better in each required course, and maintain a 2.0 GPA in all transferable coursework to be eligible for transfer.
- If you were not eligible for admission to the university when you graduated from high school because you did not meet the scholarship requirement, you must:

1. Complete 90 quarter units/60 semester units of transferable college credit with at least a 2.4 GPA (2.8 for nonresidents). No more than 21 quarter/14 semester units may be taken as Pass/No Pass, and
2. Complete the following seven transferable college courses, earning a grade of **C** or better in each course:
  - Two courses in English composition;
  - One course in mathematical concepts and quantitative reasoning;
  - Four courses chosen from at least two of these subject areas: arts and humanities, social and behavioral sciences, and physical and biological sciences; and
  - Each course must be worth at least 4–5 quarter/3 semester units.

For a list of UC-transferable courses and those that specifically meet the seven-course pattern described above, visit [assist.org](http://assist.org).

Eligibility for transfer does not guarantee admission. To present a competitive application, students are encouraged to exceed minimum requirements.

### Nonresidents

The minimum admission requirements for nonresidents are very similar to those for residents. If you are not a California resident, consult with the admissions office at the university campus(es) that you're interested in for specific admission requirements. In all cases, however, nonresidents must have a grade-point average of 2.8 or higher in all transferable college coursework.

Be aware that many campuses use criteria that exceed these minimum requirements to select students for admission. For nonresident admission information, you are advised to consult frequently with a counselor and/or read university catalog and university websites or contact the admissions office at the appropriate university.

### Priority Application Filing Period

Students are encouraged to apply during the following application periods:

Application Accepted For	CSU	UC
Fall	10/1 – 11/30	11/1 – 11/30
Winter	6/1 – 6/30	7/1 – 7/31
Spring	8/1 – 8/31	10/1 – 10/31
Summer	2/1 – 2/28	N/A

While all campuses accept students for fall admission, many do not accept for spring or winter. Consult a counselor for details about a specific campus.



# 2018–2019 Foothill College General Education & Graduation Requirements

The Foothill College general education (GE) pattern is designed to ensure that the student meets the four institutional/general education student learning outcomes:

- 1. Communication:** Demonstrate analytical reading and writing skills, including evaluation, synthesis and research; deliver focused and coherent presentations; and demonstrate active, discerning listening and speaking skills in lectures and discussions.
- 2. Computation:** Demonstrate complex problem-solving skills, technology skills, computer proficiency and decision analysis through synthesis and evaluation; apply mathematical concepts and reasoning; and analyze and use numerical data.
- 3. Creative, Critical & Analytical Thinking:** Demonstrate judgment, decision-making skills and intellectual curiosity; demonstrate problem-solving skills through analysis, synthesis and evaluation; develop creativity and aesthetic awareness; conduct research methodology; and identify and respond to a variety of learning styles and strategies.
- 4. Community/Global Consciousness & Responsibility:** Demonstrate social perceptiveness, including citizenship, community service, cultural awareness, empathy, ethics, interpersonal skills, personal integrity, respect, self-esteem and sensitivity; and exhibit interest in and pursuit of lifelong learning.

Completion of the Foothill College general education pattern requires that students successfully earn a minimum of 30 units from the courses listed on pages 71–72 with at least one course in humanities, English, natural sciences (with laboratory), social and behavioral sciences, communication and analytical thinking, United States cultures and communities, and two courses in lifelong learning from two different academic departments. Courses may only be used in one area.

## I. HUMANITIES

ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 4A, 4G, 5A, 5B, 20B, 36, 45B; CRWR 6, 25A, 39A, 41A; DANC 10; ENGL 5, 7, 12, 14, 16, 17, 18A, 22, 24, 31, 34C, 37, 40, 41, 43A, 43AH, 43B, 43BH, 45A, 45AH, 45B, 45BH, 47A, 47AH, 47B, 47BH, 49; GID 1; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7, 7H, 9, 58; JAPN 14A, 14B; MDIA 1, 1H, 2A, 2B, 2C, 4, 7, 11, 11H, 13; MUS 1, 2A, 2B, 2C, 2D, 2F, 7, 7D, 7E, 7F, 8, 8H, 11D, 11E, 11F; PHIL 2, 4, 11, 12, 20A, 20B, 20C, 24, 25; PHOT 5, 8, 8H, 10, 10H, 11, 11H; SPAN 4, 5, 6, 13A, 13B, 14A, 14B; THTR 1, 2A, 2B, 2F, 8, 12A, 26.

## II. ENGLISH

ENGL 1A, 1AH, 1S & 1T.

## III. NATURAL SCIENCES (WITH LABORATORY)

ANTH 1 w/1L, 1H w/1HL; ASTR 10A w/10L, 10B w/10L, 10BH w/10L; BIOL 9 w/9L, 10, 13, 14, 15, 41; CHEM 1A, 1AH, 9, 20, 25, 30A; GEOG 1; HORT 10; PHYS 2A, 4A; PSE 20.

## IV. SOCIAL & BEHAVIORAL SCIENCES

ANTH 2A, 2AH, 2B, 3, 5, 8, 12, 14, 15, 20, 22; BUSI 22, 22H, 53; CHLD 1, 2; ECON 1A, 1B, 9, 9H, 25; GEOG 2, 5, 10; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 17CH, 18, 20; KINS 2, 10, 51; POLI 1, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 1H, 4, 9, 10, 14, 21, 22, 25, 30, 33, 40, 49; SOC 1, 1H, 10, 11, 15, 19, 20, 23, 28, 30, 40; SPED 2; WMN 5, 21.

## V. COMMUNICATION & ANALYTICAL THINKING

COMM 1A, 1AH, 1B, 1BH, 2, 3, 4, 54A, 55; C S 1A, 1AH, 1B, 1C, 2A, 2AH, 2B, 2C, 3A, 18; ENGL 1B, 1BH, 50C; GEOG 11; GIST 11; MATH 1A, 1AH, 1B, 1BH, 1C, 10, 11, 12, 17, 22, 44, 48A, 48B, 48C; MDIA 3; PHIL 1, 7, 30; PSYC 7; SOC 7.

## VI. UNITED STATES CULTURES & COMMUNITIES

CHLD 51A; COMM 10, 12; ENGL 7, 12, 40, 45A, 45AH, 45B, 45BH; HIST 10; MDIA 8A, 12; MUS 8, 8H; PHOT 8, 8H; PSYC 22; SOC 8, 23; SPAN 10A; SPED 1; THTR 8; WMN 5.

## VII. LIFELONG LEARNING

The student must successfully complete a total of four units or more in lifelong learning from two different academic departments. For the purpose of this area, ATHL, DANC, PHDA and PHED will be considered one academic department.

ATHL 4, 4A, 4B, 4C, 4E, 4F, 11, 11A, 11B, 11C, 11E, 11F, 12, 12A, 12B, 12C, 12E, 12F, 21, 21A, 21B, 21C, 21E, 21F, 22, 22A, 22B, 22C, 22E, 22F, 31, 31A, 31B, 31C, 31E, 31F, 32, 32A, 32B, 32C, 32E, 32F, 33, 33A, 33B, 33C, 33E, 33F, 41, 41A, 41B, 41C, 41D, 42, 42A, 42B, 42C, 42E, 42F, 44, 44A, 44B, 44C, 44E, 44F, 45, 45A, 45B, 45C, 45E, 45F; BIOL 8, 9, 12; CNSL 1, 52, 72, 90; COMM 2, 10, 12, 55; CRLP 7, 55, 73, 74; DANC 1A, 1B, 1C, 2A, 2B, 3A, 3B, 4A, 4B, 4C, 5, 6, 7, 8, 13A, 13B, 14, 18A, 18B; HLTH 20, 21, 22, 23; KINS 4; LIBR 10, 10H; PHDA 16, 17, 18, 19, 20, 21A, 21B, 22, 23, 24, 25; PHED 10A, 10B, 10C, 11A, 11B, 11C, 13, 13A, 13B, 13C, 14, 15A, 15B, 15C, 17A, 17B, 18, 18B, 18C, 19B, 19C, 19D, 20A, 20B, 20C, 21, 21A, 21B, 21C, 21D, 21E, 22, 22A, 22B, 22C, 22E, 23A, 23B, 24, 24A, 24B, 24C, 24D, 25A, 25B, 26, 26A, 26C, 26D, 26E, 26F, 27, 27A, 27B, 27C, 31A, 31B, 31C, 31D, 32C, 33, 33A, 33B, 36A, 36B, 36C, 37, 37A, 37B, 38A, 38B, 38C, 38D, 38E, 40, 40A, 40B, 40C, 41, 41A, 41B, 41C, 42, 43A, 45, 45A, 45C, 46, 46A, 46B, 47B, 47C, 49A, 49B; PSYC 49; SOC 19, 40; SPED 1.

Effective Summer Session 2018

Minimum proficiency: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180\* completed with a letter grade of C or better.

*\*Intermediate algebra or equivalent means MATH 105 or mathematics placement test score indicating eligibility for a mathematics course beyond the level of MATH 105, or completion of a higher-level course with a grade of C or better, or completion of a bachelor's degree or higher from an accredited U.S. college or university.*

It is imperative to note that the Foothill College general education pattern is only appropriate for students pursuing the Foothill College associate in arts or associate in science degree. However, it is not appropriate for students pursuing an A.A.-T or A.S.-T degree. Students planning to earn an A.A.-T or A.S.-T must complete either the IGETC or CSU GE Breadth general education pattern. Note that completion of the IGETC or CSU GE Breadth pattern may also be used to satisfy the general education requirements for the Foothill A.A./A.S. degree. **Because there are significant differences between the three patterns, the student is strongly advised to meet with a counselor to determine which pattern will best meet the student's goals.**



## 2018–2019 Intersegmental General Education Transfer Curriculum (IGETC)

IGETC is a pattern of Foothill College courses that fulfills lower-division general education requirements for transfer to California State University (CSU) and University of California (UC). IGETC is an alternative to the CSU and local UC General Education Breadth Requirements. Many private universities also recognize IGETC for fulfillment of general education requirements. IGETC is a good option for the student who intends to transfer but is undecided about a major and/or unsure about attending CSU or UC. Some majors require extensive lower-division preparation, therefore, IGETC may not be the best choice for general education. Some universities do not accept IGETC. Always consult a counselor when developing an educational plan.

Course requirements for all areas of IGETC must be completed with a grade of C or better and certified by Foothill College for university credit. Submit a request for IGETC certification at the Counseling Center or Admissions Office. For updated information, consult your counselor or visit [assist.org](http://assist.org).

Completion of IGETC requirements also qualifies students for a Foothill College Certificate of Achievement in Transfer Studies.

### AREA 1—ENGLISH COMMUNICATION

**CSU:** Three courses required, one from Group A, B and C.

**UC:** Two courses required, one each Group A and B.

**Group A:** English Composition, one course: five quarter units ENGL 1A or 1AH or 1S and 1T (both 1S and 1T must be completed to satisfy this requirement.)

**Group B:** Critical Thinking–English Composition, one course: five quarter units ENGL 1B, 1BH, 1C, 1CH, PHIL 1

**Group C:** Oral Communication (CSU requirement only) one course: five quarter units COMM 1A, 1AH, 1B, 1BH, 2, 3, 4

### AREA 2—MATHEMATICAL CONCEPTS & QUANTITATIVE REASONING

One course: four to five quarter units C S 18; MATH 1A, 1AH, 1B, 1BH, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 44, 48C; PSYC 7; SOC 7.

### AREA 3—ARTS & HUMANITIES

At least three courses, with at least one course from Arts and one course from Humanities: nine semester units; 12–15 quarter units.

**Arts:** ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 3; DANC 10; ENGL 34C; MDIA 1, 1H, 2A, 2B, 2C, 3, 4, 5, 6, 7; MUS 1, 2A, 2B, 2C, 2D, 2F, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11D, 11E; PHIL 11; PHOT 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 26 .

**Humanities:** CRWR 25A; ENGL 5, 7, 8, 11, 11H, 12, 14, 16, 17,

18A, 22, 24, 31, 34C, 37, 40, 41, 43A, 43AH, 43B, 43BH, 45A, 45AH, 45B, 45BH, 47A, 47AH, 47B, 47BH; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7, 7H, 9; JAPN 4, 5, 6; MDIA 11, 11H, 12; PHIL 2, 4, 8, 12, 20A, 20B, 24, 25; SPAN 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

### AREA 4—SOCIAL & BEHAVIORAL SCIENCES

(CSU transfers see note re: U.S. History & American Ideals)

At least three courses from at least two disciplines or an interdisciplinary sequence: 12–15 quarter units.

ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 20, 22; ART 2E; CHLD 1, 2; COMM 10, 12; ECON 1A, 1B, 9, 9H, 25; EDUC 2; GEOG 2, 5, 10; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 17CH, 18, 19, 20; HLTH 20, 22; JRNL 2; KINS 2, 10; MDIA 8A, 9, 13; MUS 11F; PHOT 8, 8H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 1H, 4, 9, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40; SOSOC 1, 2, 20; SPED 1, 2; WMN 5, 11, 21.

### AREA 5—PHYSICAL & BIOLOGICAL SCIENCES

At least two courses, one Physical Science course and one Biological Science course; at least one must include a laboratory. Laboratory courses are indicated with an asterisk (\*): 9–12 quarter units.

**Physical Sciences:** ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1AH\*, 1B\*, 1BH\*, 1C\*, 9\*, 12A, 12AL\*, 12B, 12BL\*, 12C, 12CL\*, 13AH\*, 13BH\*, 13CH\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*, 20; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12; PSE 20\*.

**Biological Sciences:** ANTH 1, 1H, 1L\*, 1HL\*; 13, 13L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

### AREA 6—LANGUAGE OTHER THAN ENGLISH

(UC Requirement Only) Proficiency equivalent to two years of high school study in the same language. Transcripts must be on file with Foothill College.

JAPN 2, 3, 4, 5, 6; SPAN 2, 3, 4, 5, 6, 10A.

For updated information, visit [assist.org](http://assist.org).

Effective Fall Quarter 2018

### CSU Graduation Requirement in U.S. History, Constitution & American Ideals

This CSU requirement is not a part of IGETC. CSU transfer students completing IGETC must complete this requirement prior to graduation from CSU. Courses used to fulfill IGETC may be double-counted toward this requirement.

In order to complete this requirement prior to transfer, students must complete one course from Group One and one course from Group Two:  
Group One: POLI 1  
Group Two: HIST 17A, 17B or 17C/17CH

REV.

REV.

## 2018–2019 California State University General Education Breadth Requirements

Foothill College will certify completion of up to 58 quarter units of the 70-unit general education requirement for graduation from the CSU for the student who meets the following course patterns. A minimum of 45 units in GE, including all of Area A and B-4 (Math) must be completed prior to transfer. Courses may not be counted in more than one area. For updated information, consult your counselor or visit [assist.org](http://assist.org). Completion of the CSU GE requirements also qualifies students for a Foothill College Certificate of Achievement in Transfer Studies.

### AREA A—ENGLISH LANGUAGE & CRITICAL THINKING

12–15 quarter units are required for admission and must be completed with a grade of C or better.

**A-1 Oral Communication:** (select one course) COMM 1A, 1AH, 1B, 1BH, 2, 3 or 4

**A-2 Written Communication:** ENGL 1A, 1AH, 1B, 1BH, 1S and 1T (both courses must be combined for credit)

**A-3 Critical Thinking:** (select one course) PHIL 1, 7, 30; ENGL 1B, 1BH, 1C, 1CH

### AREA B—SCIENTIFIC INQUIRY & QUANTITATIVE REASONING

12–15 quarter units. Choose one course from B-1, B-2 and B-4. One course must include a laboratory. Laboratory courses are indicated with an asterisk (\*).

**B-1 Physical Science:** ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1AH\*, 1B, 1BH\*, 1C\*, 9\*, 12A, 12AL\*, 12B\*, 12BL\*, 12C, 12CL\*, 13AH\*, 13BH\*, 13CH\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*, 20; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12; PSE 20\*.

**B-2 Life Science (Biological):** ANTH 1, 1L\*, 1H, 1HL\*, 13, 13L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

**B-4 Mathematics/Quantitative Reasoning:** Course must be completed with grade of C or better; required for admission to CSU. C S 18; MATH 1A, 1AH, 1B, 1BH, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 42, 44, 48A, 48B, 48C; PSYC 7; SOC 7. (Note: MATH 17 is approved through Summer 2019)

### AREA C—ARTS & HUMANITIES

Complete 12–15 quarter units, including a minimum of one course from Area C-1 and one course from Area C-2. Note: If you did not complete ENGL 1B for Area A-3, you must complete ENGL 1B as one of the Area C courses.

**C-1 Arts (Art, Dance, Music, Theatre):** ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 3, 4A, 6; DANC 10; ENGL 34C; MDIA 1, 1H, 2C, 3, 4, 5, 6, 7; MUS 1, 2A, 2B, 2C, 2D, 2F, 3A, 3B, 3C, 7, 7D,

7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11D, 11E; PHIL 11; PHOT 1, 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 20A, 26.

### C-2 Humanities (Literature, Philosophy, Foreign Languages):

COMM 12; CRWR 6, 25A, 39A, 39B, 41A, 41B; ENGL 1B, 1BH, 5, 7, 8, 11, 11H, 12, 14, 16, 17, 18A, 22, 24, 31, 34C, 37, 40, 41, 43A, 43AH, 43B, 43BH, 45A, 45AH, 45B, 45BH, 47A, 47AH, 47B, 47BH, 49; HIST 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7, 7H, 9; JAPN 1, 2, 3, 4, 5, 6; MDIA 2A, 2B, 11, 11H, 12; PHIL 2, 4, 8, 12, 20A, 20B, 20C, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

### AREA D—SOCIAL SCIENCES

Students are required to complete 12–15 quarter units from at least two different disciplines in Areas D1–D0 below.

Note: CSU requires students to complete a two-course American Institutions (AI) requirement that can be satisfied by completing:

1. POLI 1 and
2. HIST 17A, 17B or 17C/CH.

CSU-bound students are encouraged to complete the AI course requirement while fulfilling their Area D coursework. ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 16L, 17L, 18L, 20, 22, 52; ART 2E; CHLD 1, 2, 50A, 51A, 88; COMM 10, 12; ECON 1A, 1B, 9, 9H, 25; EDUC 2; ENGL 12, 22, 31; GEOG 2, 5, 10; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 17CH, 18, 19, 20; HLTH 20, 22, 23; JRNL 2; KINS 2, 10; MDIA 8A, 9, 13; MUS 8, 8H, 11F; PHIL 24, 25; PHOT 8, 8H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 1H, 4, 9, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40; SOSOC 1, 2, 20; SPED 1, 2; WMN 5, 11, 21.

### AREA E—LIFELONG UNDERSTANDING & SELF-DEVELOPMENT

A minimum of four quarter units from the following: BIOL 8; CNSL 52, 72; CRLP 7; HLTH 21, 23, 60; KINS 4, 9, 15; SOC 19, 40; SPED 1, 2; physical education activity courses from ATHL, PHDA and PHED (maximum allowed: 2 units) includes DANC 1A, 1B, 1C, 2A, 2B, 3A, 3B, 4A, 4B, 4C, 5, 6, 7, 8, 11A, 11B, 11C, 12A, 12B, 12C, 13A, 13B, 14, 18A, 18B.

For updated information, visit [assist.org](http://assist.org).

Effective Fall Quarter 2018

## Degree & Certificate Requirements

As this catalog goes to press, Foothill College offers 24 state-approved A.A.-T. and A.S.-T. degrees, including anthropology, art history, biology, business administration, communication studies, computer science, early childhood education, economics, English, geography, global studies, history, kinesiology, mathematics, philosophy, physics, political science, psychology, public health science, social justice studies, sociology, Spanish, studio arts and Theatre Arts. Foothill is developing more A.A.-T. and A.S.-T. degrees, which will become active during this catalog rights cycle. For more information, consult a Foothill counselor and review the Foothill College website.

### ACCOUNTING

**Program Type(s): Associate in Arts Degree, Certificate of Achievement, Certificate of Proficiency [Non-Transcriptable], Career Certificate [Non-Transcriptable]**

May be transferrable to a four-year university.

Units required for major: 53, certificate: 9-53

#### PROGRAM LEARNING OUTCOMES

- Students will be able to explain accounting terminology, concepts, principles, and frameworks.
- Students will be able to perform accounting-related calculations and demonstrate the ability to use methods and/or procedures to solve accounting problems.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (43 units)

ACTG 1A Financial Accounting I (5 units)  
ACTG 1B Financial Accounting II (5 units)  
or ACTG 1BH Honors Financial Accounting II (5 units)  
ACTG 1C Managerial Accounting (5 units)  
or ACTG 1CH Honors Managerial Accounting (5 units)  
ACTG 64A Computerized Accounting Practice Using QuickBooks (4 units)  
ACTG 64B Computerized Accounting Practice Using Excel (4 units)  
ACTG 67 Tax Accounting (5 units)  
BUSI 18 Business Law I (5 units)  
BUSI 22 Principles of Business (5 units)  
or BUSI 22H Honors Principles of Business (5 units)  
ECON 1A Principles of Macroeconomics (5 units)  
or ECON 1B Principles of Microeconomics (5 units)

##### Support Courses: (10 units)

Select 10 units from the following:

ACTG 51A Intermediate Accounting I (5 units)  
ACTG 51B Intermediate Accounting II (5 units)  
ACTG 51C Intermediate Accounting III (5 units)  
ACTG 52 Advanced Accounting (5 units)  
ACTG 53 Financial Statement Analysis (5 units)  
ACTG 58 Auditing (5 units)  
ACTG 59 Fraud Examination (5 units)  
ACTG 60 Accounting for Small Business (5 units)  
ACTG 65 Payroll & Business Tax Accounting (4 units)  
ACTG 66 Cost Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)  
ACTG 68B Advanced Tax Accounting II (5 units)  
ACTG 68C Advanced Tax Accounting III (3 units)  
ACTG 70R Independent Study in Accounting (1 unit)  
ACTG 71R Independent Study in Accounting (2 units)  
ACTG 72R Independent Study in Accounting (3 units)  
ACTG 73R Independent Study in Accounting (4 units)  
ACTG 75 Accounting for Government & Not-for-Profit (5 units)

ACTG 76 Ethics in Accounting (5 units)  
BUSI 11 Introduction to Information Systems (5 units)  
BUSI 19 Business Law II (4 units)

##### Certificate of Achievement in Accounting (53 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

##### Certificate of Achievement in CPA Examination Preparation (40 units)

ACTG 1A Financial Accounting I (5 units)  
ACTG 1B Financial Accounting II (5 units)  
ACTG 51A Intermediate Accounting I (5 units)  
ACTG 51B Intermediate Accounting II (5 units)  
ACTG 51C Intermediate Accounting III (5 units)  
ACTG 52 Advanced Accounting (5 units)  
or ACTG 53 Financial Statement Analysis (5 units)  
ACTG 58 Auditing (5 units)  
ACTG 75 Accounting for Government & Not-for-Profit (5 units)

##### Tax Accounting Career Certificate (27 units)

**[Non-Transcriptable]**

ACTG 1B Financial Accounting II (5 units)  
ACTG 64A Computerized Accounting Practice Using QuickBooks (4 units)  
ACTG 67 Tax Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)  
ACTG 68B Advanced Tax Accounting II (5 units)  
ACTG 68C Advanced Tax Accounting III (3 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

##### Financial Accounting Career Certificate (25 units)

**[Non-Transcriptable]**

ACTG 1A Financial Accounting I (5 units)  
ACTG 1B Financial Accounting II (5 units)  
ACTG 51A Intermediate Accounting I (5 units)  
ACTG 51B Intermediate Accounting II (5 units)  
ACTG 51C Intermediate Accounting III (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

##### Enrolled Agent Preparation Certificate of Proficiency (18 units)

**[Non-Transcriptable]**

ACTG 67 Tax Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)  
ACTG 68B Advanced Tax Accounting II (5 units)  
ACTG 68C Advanced Tax Accounting III (3 units)



Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

#### **Bookkeeping Specialist Certificate of Proficiency (17 units)** **[Non-Transcriptable]**

ACTG 60 Accounting for Small Business (5 units)  
or ACTG 1A Financial Accounting I (5 units)  
ACTG 64A Computerized Accounting Practice Using QuickBooks (4 units)  
ACTG 64B Computerized Accounting Practice Using Excel (4 units)  
ACTG 65 Payroll & Business Tax Accounting (4 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

#### **Tax Specialist Certificate of Proficiency (14 units)** **[Non-Transcriptable]**

ACTG 65 Payroll & Business Tax Accounting (4 units)  
ACTG 67 Tax Accounting (5 units)  
ACTG 68A Advanced Tax Accounting I (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

#### **Payroll Preparation Certificate of Proficiency (9 units)** **[Non-Transcriptable]**

ACTG 60 Accounting for Small Business (5 units)  
or ACTG 1A Financial Accounting I (5 units)  
ACTG 65 Payroll & Business Tax Accounting (4 units)

Note: Non-transcriptable certificates are maintained and awarded by the Accounting Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

## ANTHROPOLOGY

#### **Program Type(s): Associate in Arts Degree, Certificate of Proficiency** **[Non-Transcriptable]**

Units required for major: 36, certificate: 14-20

#### **PROGRAM LEARNING OUTCOMES**

- Students will be able to understand and apply cultural relativism; they will be able to convey an understanding of multiple cultural perspectives.
- Students will demonstrate a core knowledge base in anthropology appreciating and reflecting on human diversity in the past and present.
- Students will integrate their knowledge and understanding of anthropological concepts and methods to creatively and ethically solve real-world human problems at the local, regional, and global scales.

- Students will be able to articulate key concepts and events in the process of human evolution and demonstrate knowledge, skills and abilities toward that end.
- Students will be able to critically assess the important role that the past plays on the present, and conversely, the important role that the present has on the past from both local, regional, national and worldwide perspectives.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (12 units)**

ANTH 1 Introduction to Physical Anthropology (4 units)  
or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ANTH 8 Introduction to Archaeology (4 units)

##### **Support Courses: (24 units)**

Select 12 units from the following:

ANTH 1L Physical Anthropology Laboratory (1 unit)  
or ANTH 1HL Honors Physical Anthropology Laboratory (1 unit)  
ANTH 2B Patterns of Culture (4 units)  
ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)  
ANTH 4 First Peoples of North America (4 units)  
ANTH 5 Magic, Science & Religion (4 units)  
ANTH 6 Peoples of Africa (4 units)  
ANTH 12 Applied Anthropology (4 units)  
ANTH 13 Introduction to Forensic Anthropology (4 units)  
ANTH 13L Forensic Anthropology Laboratory (1 unit)  
ANTH 14 Linguistic Anthropology (4 units)  
ANTH 15 Medical Anthropology: Methods & Practice (4 units)  
ANTH 16L Basic Archaeology Laboratory (1 unit)  
or ANTH 17L Intermediate Archaeology Laboratory (2 units)  
ANTH 20 Native Peoples of California (4 units)  
ANTH 22 The Aztec, Maya, Inca & Their Predecessors: Civilizations of the Americas (4 units)  
GEOG 1 Physical Geography (5 units)  
or GEOG 2 Human Geography (4 units)  
PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)

And 12 units<sup>[1]</sup> from the following:

ANTH 51 Archaeology Survey (2 units)  
ANTH 52 Archaeological Field Methods (4 units)  
ANTH 55 Applied Cultural Anthropology Field Methods (1 unit)  
ANTH 56 Applied Physical Anthropology Field Methods (1 unit)  
ANTH 57 Applied Archaeology Field Methods (1 unit)  
ANTH 67A Cultures of the World: Ecuador (4 units)  
ANTH 67B Cultures of the World: Belize (4 units)  
ANTH 67C Cultures of the World: British Isles (4 units)  
ANTH 67E Cultures of the World: Mediterranean (4 units)  
ANTH 70R Independent Study in Anthropology (1 unit)  
ANTH 71R Independent Study in Anthropology (2 units)  
ANTH 72R Independent Study in Anthropology (3 units)  
ANTH 73R Independent Study in Anthropology (4 units)  
BIOL 1C Evolution, Systematics & Ecology (6 units)  
BIOL 10 General Biology: Basic Principles (5 units)  
HIST 4A History of Western Civilization to 800 CE (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 18 Introduction to Middle Eastern Civilization (4 units)  
 HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
 SOC 30 Social Psychology (4 units)  
 or PSYC 30 Social Psychology (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 SOSOC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)

<sup>[1]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

#### **Cultural Resource Management Certificate of Proficiency (19-20 units) [Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

ANTH 4 First Peoples of North America (4 units)  
 ANTH 8 Introduction to Archaeology (4 units)  
 ANTH 51 Archaeology Survey (2 units)  
 ANTH 52 Archaeological Field Methods (4 units)

And ONE course from the following:

ANTH 16L Basic Archaeology Laboratory (1 unit)  
 ANTH 17L Intermediate Archaeology Laboratory (2 units)

And 4 units from the following:

ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)  
 ANTH 12 Applied Anthropology (4 units)  
 ANTH 20 Native Peoples of California (4 units)  
 ANTH 22 The Aztec, Maya, Inca & Their Predecessors: Civilizations of the Americas (4 units)

#### **Medical Anthropology Certificate of Proficiency (16-17 units) [Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

ANTH 1 Introduction to Physical Anthropology (4 units)  
 or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ANTH 15 Medical Anthropology: Methods & Practice (4 units)

And ONE course from the following:

ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 12 Applied Anthropology (4 units)  
 ANTH 14 Linguistic Anthropology (4 units)  
 COMM 12 Intercultural Communication (5 units)

#### **Applied Anthropology Certificate of Proficiency (17 units) [Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

ANTH 1 Introduction to Physical Anthropology (4 units)  
 or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ANTH 12 Applied Anthropology (4 units)

And ONE course from the following:

ANTH 55 Applied Cultural Anthropology Field Methods (1 unit)  
 ANTH 56 Applied Physical Anthropology Field Methods (1 unit)  
 ANTH 57 Applied Archaeology Field Methods (1 unit)

And 4 units from the following:

ANTH 13 Introduction to Forensic Anthropology (4 units)  
 ANTH 14 Linguistic Anthropology (4 units)  
 ANTH 15 Medical Anthropology: Methods & Practice (4 units)

#### **Forensic Anthropology Certificate of Proficiency (14 units) [Non-Transcriptable]**

There are no English or mathematics proficiency requirements for this certificate.

ANTH 1 Introduction to Physical Anthropology (4 units)  
 or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
 ANTH 1L Physical Anthropology Laboratory (1 unit)  
 or ANTH 1HL Honors Physical Anthropology Laboratory (1 unit)  
 ANTH 13 Introduction to Forensic Anthropology (4 units)  
 ANTH 13L Forensic Anthropology Laboratory (1 unit)  
 ANTH 15 Medical Anthropology: Methods & Practice (4 units)

### **ASSOCIATE DEGREE FOR TRANSFER-ANTHROPOLOGY**

#### **Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

#### **PROGRAM LEARNING OUTCOMES**

- Students will be able to apply an understanding of cross-cultural realities both past and present.
- Students will know how to critically analyze and interpret anthropological data.
- Students will apply anthropological principles for solving human problems on the local, regional and world scales.

#### **ASSOCIATE DEGREE REQUIREMENTS \***

##### **Core Courses: (12 units)**

ANTH 1 Introduction to Physical Anthropology (4 units)  
 or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ANTH 8 Introduction to Archaeology (4 units)

##### **Support Courses: (15-16 units)**

Complete 5 units from List A:

List A:

ANTH 1L Physical Anthropology Laboratory (1 unit)  
 or ANTH 1HL Honors Physical Anthropology Laboratory (1 unit)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

ANTH 14 Linguistic Anthropology (4 units)  
 BIOL 9 Environmental Biology (4 units)  
 BIOL 10 General Biology: Basic Principles (5 units)  
 BIOL 15 California Ecology/Natural History (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)

And complete ONE course from List B:

List B:

Any course not used in List A (minimum of 4 units), or any of the following:

GEOG 12 Introduction to Geospatial Technology (4 units)  
 or GIST 12 Introduction to Geospatial Technology (4 units)  
 PSYC 10 Research Methods & Designs (5 units)  
 or SOC 10 Research Methods & Designs (5 units)

And complete 6 units from List C:

List C:

Any course not used in List A or List B, or any of the following:

ANTH 2B Patterns of Culture (4 units)  
 ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)  
 ANTH 4 First Peoples of North America (4 units)  
 ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 12 Applied Anthropology (4 units)  
 ANTH 13 Introduction to Forensic Anthropology (4 units)  
 ANTH 13L Forensic Anthropology Laboratory (1 unit)  
 ANTH 15 Medical Anthropology: Methods & Practice (4 units)  
 ANTH 16L Basic Archaeology Laboratory (1 unit)  
 ANTH 17L Intermediate Archaeology Laboratory (2 units)  
 ANTH 20 Native Peoples of California (4 units)  
 ANTH 22 The Aztec, Maya, Inca & Their Predecessors: Civilizations of the Americas (4 units)  
 ANTH 51 Archaeology Survey (2 units)  
 ANTH 52 Archaeological Field Methods (4 units)  
 ANTH 55 Applied Cultural Anthropology Field Methods (1 unit)  
 ANTH 56 Applied Physical Anthropology Field Methods (1 unit)  
 ANTH 57 Applied Archaeology Field Methods (1 unit)  
 ANTH 70R Independent Study in Anthropology (1 unit)  
 COMM 12 Intercultural Communication (5 units)  
 GEOG 2 Human Geography (4 units)  
 MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 or PHIL 25 Comparative World Religions: West (4 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)  
 SOC 23 Race & Ethnic Relations (4 units)

## APPRENTICESHIP - AIR CONDITIONING AND REFRIGERATION TECHNOLOGY

**Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 46, certificate: 46

### PROGRAM LEARNING OUTCOMES

- In compliance with applicable standards and codes, students will demonstrate ability to install and remove refrigeration, heating, air conditioning, and ventilation systems, including the appropriate electrical/electronic control systems.
- In compliance with applicable standards and codes, students will demonstrate ability to maintain, repair, extend, and/or alter refrigeration, heating, air conditioning, and ventilation systems, including electronic control systems.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (46 units)

APPT 129 Special Topics (2.5 units)  
 APPT 130 Review & Turnout (2.5 units)  
 APPT 151 RF 101 Basic Refrigeration Service Skills (5 units)  
 APPT 152 RF 102 Basic Electricity & Refrigeration (4.5 units)  
 APPT 153 RF 201 Mechanical Systems (4.5 units)  
 APPT 154 RF 202 Electric Controls Fundamentals (4.5 units)  
 APPT 155 RF 301 Advanced Electric Controls (4.5 units)  
 APPT 156 RF 302 HVAC Pneumatic & Electronic Control Systems (4.5 units)  
 APPT 157 RF 401 Industrial Refrigeration & Air-Conditioning Service (4.5 units)  
 APPT 158 RF 402 Advanced Refrigeration & Chillers (4.5 units)  
 APPT 159 RF 501 Start, Test & Balance; HVAC Systems (4.5 units)

#### Certificate of Achievement in Air Conditioning and Refrigeration Technology (46 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Jose.

## APPRENTICESHIP - FIELD IRONWORKERS

**Program Type(s): Certificate of Achievement**

Units required for certificate: 35.5

### PROGRAM LEARNING OUTCOMES

Students gain expertise and hands-on experience as they work on unloading materials, erecting buildings, and connecting fabricated iron beams to form project skeletons. Individuals work primarily on industrial, commercial and large residential buildings. Students learn to build towers, bridges, stadiums, and pre-fabricated metal buildings, including erecting pre-cast beams, columns and panels. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction industry. After four years of classroom and work experience, students can become a journey person in the ironworking industry.

#### Certificate of Achievement in Field Ironworking (35.5 units)

APIW 100 Introduction to Ironworking (3 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.



APIW 101 Mixed Base (2 units)  
 APIW 102 Reinforcing Iron I (2 units)  
 APIW 103 Rigging I (2 units)  
 APIW 104 Ironworker History & Trade Science (2 units)  
 APIW 105 Welding I (2 units)  
 APIW 106 Structural I (2 units)  
 APIW 107 Welding II (2 units)  
 APIW 109 Post-Tensioning I (2 units)  
 APIW 110 Architectural I (2 units)  
 APIW 111 Architectural II (2 units)  
 APIW 112 Lead Hazard Training (2 units)  
 APIW 113 Small Structure Erection (2 units)  
 APIW 114 Welding III (2 units)  
 APIW 115 Cranes (2 units)  
 APIW 116 Foreman Training (2 units)  
 APIW 117 General Safety/OSHA 30/COMET (2.5 units)

Currently offered at: Fresno.

## APPRENTICESHIP - GENERAL ELECTRICIAN

**Program Type(s): Associate in Science Degree, Certificate of Achievement, Career Certificate [Non-Transcriptable]**

Units required for major: 40-46, certificate: 18-46

### PROGRAM LEARNING OUTCOMES

Students gain hands-on experience as they work on electrical systems and component wiring to include: power distribution systems, electrical panels, wiring, conduit, piping, test equipment, transformers, motors, grounding, over-current protection, security, solar and home automation systems. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction and service industry. After five years of classroom and work experience, students who pass the state license exam are recognized as journeypersons in the electrical trades industry.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (40-46 units)

APEL 120 Orientation to the Electrical Trade (4 units)  
 or APEL 120A Orientation to the Electrical Trade, CPR & First Aid (5 units)  
 APEL 121 Electron Theory; Basic Blueprint Reading; DC Theory; National Electrical Code Introduction (4 units)  
 or APEL 121A Electron Theory; AC & DC Electrical Theory; NEC Introduction; Parallel & Combination Circuits (5 units)  
 APEL 122 Codeology; Test Equipment; Pipe Bending; Blueprints (4 units)  
 or APEL 122A Codeology; NEC Code; Test Equipment; Pipe Bending; Blueprints (5 units)  
 APEL 123 AC Theory; Transformers; Intermediate National Electrical Code (4 units)  
 or APEL 123A Grounding & Bonding, Overcurrent Protection, Code & Practices, Blueprints, Codeology Skills (5 units)  
 APEL 124 DC/AC Theory Review; Electronics; Industrial Blueprints (4 units)  
 or APEL 124A DC/AC Theory Review; Electronics; Industrial Blueprints; Transformers, Grounding; Electrical Systems (5 units)  
 APEL 125 NEC Grounding; Overcurrent Protection; Transformer Connections (4 units)

or APEL 125A Fire Alarm Systems, Emergency Communication Systems, Public Emergency Systems (5 units)  
 APEL 126 Motors; Motor Control; Lighting Protection (4 units)  
 APEL 127 Digital Electronics; Motor Speed Control; Advanced National Electrical Code (4 units)  
 APEL 128 Programmable Logic Controllers; Low-Voltage Systems & High-Voltage Systems (4 units)  
 APEL 129 National Electrical Code Review (4 units)

#### Certificate of Achievement in Inside Wireman (40-46 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Francisco and San Jose.

#### Residential Electrician Career Certificate (18 units)

##### [Non-Transcriptable]

APEL 112 Residential Electrical Air Conditioning & Refrigeration; Telephone Systems (3 units)  
 APEL 113 Residential Electrical Systems: Basic Security, Solar Power, Home Automation & Life Safety (3 units)  
 APEL 135 Residential Electrical Orientation; Safety & Code Introduction (3 units)  
 APEL 136 Residential Electrical D/C Theory; Blueprint Reading (3 units)  
 APEL 137 Residential Electrical A/C Theory & Circuitry (3 units)  
 APEL 138 Residential Wiring Layout & Installation (3 units)

Currently offered at: San Jose.

## APPRENTICESHIP - PIPE TRADES

#### Program Type(s): Certificate of Achievement

Units required for certificate: 24-42.5

### PROGRAM LEARNING OUTCOMES

Students gain expertise and hands-on experience as they work on plumbing systems to include: drain waste and vent systems, systems for various industrial fluids, public or private water systems and gas piping systems. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction and service industry. After five years of classroom and work experience, students are recognized as journeypersons within the pipe trades industry.

#### Certificate of Achievement in Plumbing/Pipefitting/Pipe Trades Apprenticeship (42.5 units)

APPT 161 Safety/OSHA/Tools/Heritage/Service (4 units)  
 APPT 162 Mathematics/Science for the Plumbing Trade (4.5 units)  
 APPT 163 Code/Water Supply Systems (4 units)  
 APPT 164 Drawing I for the Plumbing Trade (4.5 units)  
 APPT 165 Drawing II for the Plumbing Trade (4 units)  
 APPT 166 Welding/Oxy-Acetylene Training (4.5 units)  
 APPT 167 Steam Systems/Rigging/Pipe Fitting & Service (4 units)  
 APPT 168 Medical Gas/Hydronics/Signal Person (4.5 units)  
 APPT 169 Advanced Drawing/Layout for the Plumbing Trades/UA Foreman Training (4 units)  
 APPT 170 Code II/Junior Mechanics Review & Exam (4.5 units)

#### Certificate of Achievement in Residential Plumbing (24 units)

APPT 121 Introduction to Residential Plumbing, Safety & Tools (2.5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

APPT 122 Residential Drainage Systems (2.5 units)  
 APPT 123 Residential Gas & Water Installations (2.5 units)  
 APPT 124 Mathematics for Residential Plumbing (2.5 units)  
 APPT 125 Residential Blueprint Reading (4.5 units)  
 APPT 126 Residential Piping Layout & Installations; Residential Fixtures (4.5 units)  
 APPT 127 Residential Plumbing Code (2.5 units)  
 APPT 128 Residential Gas Installations; Service Work (2.5 units)

## APPRENTICESHIP - PLUMBING TECHNOLOGY

**Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 48, certificate: 48

### PROGRAM LEARNING OUTCOMES

- In compliance with applicable standards and codes, students will demonstrate ability to install and remove plumbing systems such as drain waste and ventilation systems, systems for various industrial fluids, public or private water systems and gas piping systems.
- In compliance with applicable standards and codes, students will demonstrate ability to maintain, extend, and/or alter plumbing systems, including drain waste and ventilation systems, systems for various industrial fluids, public or private water systems and gas piping systems.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (48 units)

APPT 129 Special Topics (2.5 units)  
 APPT 130 Review & Turnout (2.5 units)  
 APPT 131 P-101 Basic Plumbing Skills (5 units)  
 APPT 132 P-102 Applied & Related Theory (4.5 units)  
 APPT 133 P-201 Beginning Drawing & Design (4.5 units)  
 APPT 134A P-202A Rigging; Layout (2.5 units)  
 APPT 134B Industrial Safety (2.5 units)  
 APPT 135A P-301A Plumbing Fixtures (2.5 units)  
 APPT 135B P-301B Plumbing Codes (2.5 units)  
 APPT 136 P-302 Advanced Trade Math for Plumbers (4.5 units)  
 APPT 137A P-401A Water Systems (2.5 units)  
 APPT 137B P-401B Applied Welding (2.5 units)  
 APPT 138 P-402 Advanced Drawing & Blueprint Reading (4.5 units)  
 APPT 139A Industrial Installations (2.5 units)  
 APPT 139B Medical Gas Installations (2.5 units)

#### Certificate of Achievement in Plumbing Technology (48 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Jose.

## APPRENTICESHIP - SHEET METAL

**Program Type(s): Associate in Science Degree, Certificate of Achievement, Career Certificate [Non-Transcriptable]**

Units required for major: 56.5-59.5, certificate: 6-53.5

### PROGRAM LEARNING OUTCOMES

Students are prepared with the skills and expertise to detail, fabricate and install a variety of sheet metal products in compliance with applicable standards and codes, aiming for optimum environmental and energy efficiency. These highly demanded skills are acquired through on-the-job training and lead to employment in the construction industry. After five years of classroom and work experience students are recognized as journeypersons within the sheet metal industry.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (53.5 units)

APSM 101 SMQ-1 Trade Introduction (3 units)  
 APSM 102 SMQ-2 Certified Safety & Beginning Trade Math (3 units)  
 APSM 103 SMQ-3 Sheet Metal Tools & Shop (1.5 units)  
 APSM 104 SMQ-4 Soldering & Common Seams (2 units)  
 APSM 105 SMQ-5 Drafting Introduction & Views (2.5 units)  
 APSM 106 SMQ-6 Beginning Duct Fittings (1.5 units)  
 APSM 107 SMQ-7 Parallel Line Fittings (1.5 units)  
 APSM 108 SMQ-8 Triangulation Fittings (1.5 units)  
 APSM 109 SMQ-9 Radial Line Lay Out & Ogee Offsets (1.5 units)  
 APSM 110 SMQ-10 Basics of Architectural Sheet Metal (2 units)  
 APSM 111 SMQ-11 Architectural Sheet Metal (1.5 units)  
 APSM 112 SMQ-12 Field Installation (2 units)  
 APSM 113 SMQ-13 Welding 1: Process & Safety Overview (1.5 units)  
 APSM 114 SMQ-14 Welding 2: GMAW (1.5 units)  
 APSM 116 SMQ-16 Plans & Specifications (3 units)  
 APSM 117 SMQ-17 Submittals & Shop Drawings (2.5 units)  
 APSM 118 SMQ-18 Industrial & Stainless Steel Introduction (1.5 units)  
 APSM 119 SMQ-19 HVAC Air Systems & Duct Design (3 units)  
 APSM 120 SMQ-20 Measuring & Sketching (1.5 units)  
 APSM 121 SMQ-21 Fabrication & Shortcuts (1 unit)  
 APSM 122 SMQ-22 Codes & Standards (3 units)  
 APSM 124 SMQ-24 Metal Roofing (2 units)  
 APSM 125 SMQ-25 Detailing (3 units)  
 APSM 126 SMQ-26 Foreman Training (2.5 units)  
 APSM 127 SMQ-27 Basic AutoCAD (1.5 units)  
 APSM 128 SMQ-28 HVAC Energy Conservation & Environmental Technology (2.5 units)

#### Support Courses: (3-6 units)

Select THREE courses from the following:

APSM 123 SMQ-23 Residential Sheet Metal (2 units)  
 APSM 130 SMQ-30 Advanced Welding (1.5 units)  
 APSM 131 SMQ-31 CAD Detailing (Beginning CAD Duct) (1 unit)  
 APSM 132 SMQ-32 Intermediate CAD Detailing Third Party (1 unit)  
 APSM 133 SMQ-33 Advanced Architectural (1.5 units)  
 APSM 134 SMQ-34 Advanced Layout Fabrication (1 unit)  
 APSM 135 SMQ-35 Project Management, Takeoffs & Estimates (2 units)  
 APSM 136 SMQ-36 Service Basics (2 units)  
 APSM 137 SMQ-37 Final HVAC Project (1 unit)  
 APSM 138 SMQ-38 Final Architectural, Industrial & Ornamental Project (1 unit)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

**Certificate of Achievement in Sheet Metal Building Trades (53.5 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: Bay Area Sheet Metal JAC.

**Sheet Metal Decking & Siding Career Certificate (18 units)**

**[Non-Transcriptable]**

APRT 155A Safety & Tools for Sheet Metal Siding & Decking Apprentices (4.5 units)

APRT 155B Blueprint Reading for Sheet Metal Siding & Decking Apprentices (4.5 units)

APRT 156A Welding for Sheet Metal Siding & Decking Apprentices (4.5 units)

APRT 156B Measuring, Drawing & Lifting Devices for Sheet Metal Siding & Decking Apprentices (4.5 units)

Currently offered at: Bay Area Sheet Metal JAC.

**Sheet Metal Air Conditioning Service Technician Career Certificate (10 units)**

**[Non-Transcriptable]**

APRT 140A Electrical Basics for Residential HVAC Service I (2.5 units)

APRT 140B Refrigeration Basics for Residential HVAC Service (2.5 units)

APRT 141A Components of Residential HVAC Service (2.5 units)

APRT 141B Troubleshooting Diagnosis & Repair for Residential HVAC Service (2.5 units)

Currently offered at: Bay Area Sheet Metal JAC.

**Sheet Metal Ship Yard Specialist Career Certificate (7.5 units)**

**[Non-Transcriptable]**

APRT 144A Introduction to Marine Sheet Metal Training for Apprentices I (2.5 units)

APRT 144B Introduction to Marine Sheet Metal Training for Apprentices II (2.5 units)

APRT 151A Intermediate Marine Sheet Metal Training for Apprentices I (2.5 units)

Currently offered at: Bay Area Sheet Metal JAC.

**Sheet Metal Air Conditioning Specialist Career Certificate (6 units)**

**[Non-Transcriptable]**

APPR 188A Orientation; Safety & Beginning Residential Sheet Metal Installation (Specialist 1A) (1.5 units)

APPR 188B Residential Components Identification & Installation (Specialist 1B) (1.5 units)

APPR 189A Residential Systems; Duct & HVAC Systems (Specialist 2A) (1.5 units)

APPR 189B Plans & Architectural Applications for Residential Sheet Metal (Specialist 2B) (1.5 units)

Currently offered at: Bay Area Sheet Metal JAC.

**APPRENTICESHIP - SOUND AND COMMUNICATION**

**Program Type(s): Career Certificate [Non-Transcriptable]**

Units required for certificate: 22

**PROGRAM LEARNING OUTCOMES**

Students gain expertise and hands-on experience as they work on sound and communication systems to include voice systems, data systems, video systems, fire alarm systems, intrusion systems, access control systems, data networking systems, cabling and automation systems. These specialized skills are acquired through on-the-job training and classroom instruction and lead to employment in the construction and service industry. After three years of classroom and work experience students are recognized as installers in the Sound and Communication trade for the electrical industry.

**Sound and Communication Installer Career Certificate (22 units)**

**[Non-Transcriptable]**

APSC 111 Job Information, Safety, Test Instruments, Structured Cabling, Fiber Optics (3.5 units)

APSC 112 Codes & Practices, Connectors & Raceways, Blueprint Reading, DC Theory (3.5 units)

APSC 121 AC Theory, Master Clock, Nurse Call, Computer Literacy (3.5 units)

APSC 122 Fire Alarm, Paging, Emergency Communication, Mass Notification Systems (3.5 units)

APSC 131 VDV/Fire Life Safety Prep, Networking, CCTV, CATV & DAS (4 units)

APSC 132 Radio Frequencies, Security Systems, Audio-Visual (4 units)

Currently offered at: Northern California.

**APPRENTICESHIP - STEAMFITTING AND PIPEFITTING TECHNOLOGY**

**Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 47.5, certificate: 47.5

**PROGRAM LEARNING OUTCOMES**

- In compliance with applicable standards and codes, students will demonstrate ability to install and remove piping and equipment for complex heating and air conditioning applications and special industrial piping systems, such as those used in semiconductor, biotechnology, and power generation facilities.
- In compliance with applicable standards and codes, students will demonstrate ability to maintain, extend, and/or alter piping and equipment for heating and air conditioning, and for special industrial piping systems, such as those used in semiconductor, biotechnology, and power generation facilities.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (47.5 units)**

APPT 129 Special Topics (2.5 units)

APPT 130 Review & Turnout (2.5 units)

APPT 134B Industrial Safety (2.5 units)

APPT 139A Process Piping (2.5 units)

APPT 139B Medical Gas Installations (2.5 units)

APPT 141 SF 101 Basic Steamfitting Skills (5 units)

APPT 142 SF 102 Related Math, Drawing & Rigging (4.5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.



APPT 143 SF 201 Steamfitter Cutting & Welding (4.5 units)  
 APPT 144A SF 202A Science; Electricity & Air Conditioning (2.5 units)  
 APPT 145 SF 301 Advanced Trade Math for Steamfitters (4.5 units)  
 APPT 146 SF 302 Steam Technology (4.5 units)  
 APPT 147A SF 401A Hydronic Systems (2.5 units)  
 APPT 147B SF 401B Industrial Rigging (2.5 units)  
 APPT 148 SF 402 Advanced Drawing & Blueprint Reading (4.5 units)

### **Certificate of Achievement in Steamfitting and Pipefitting Technology (47.5 units)**

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required.

Currently offered at: San Jose.

## ART

### **Program Type(s): Associate in Arts Degree, Certificate of Achievement**

May be transferrable to a four-year university.

Units required for major: 54, certificate: 54

### **PROGRAM LEARNING OUTCOMES**

- Students will be able to create two- and three-dimensional artwork and designs using appropriate tools, materials, methods and techniques.
- Students will be able to analyze and critically evaluate two- and three-dimensional creative projects using the current principles and language of art and design.

### **ASSOCIATE DEGREE REQUIREMENTS \***

#### **Core Courses: (38 units)**

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)

or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)

ART 2C History of Western Art from the Baroque to Modernism (4.5 units)

ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)

ART 4A Fundamentals in Drawing (4 units)

ART 5A 2-D Foundations (4 units)

ART 5B 3-D Foundations (4 units)

or ART 45A Beginning Ceramics Handbuilding (4 units)

ART 20A Color I (4 units)

ART 20B Color II (4 units)

#### **Support Courses: (16 units)**

Select ONE option from the following:

Option 1: Studio Arts (Two-Dimensional) Transfer Portfolio

Select TWO courses from the following:

ART 4B Intermediate Drawing (4 units)

ART 4C Representational Drawing (4 units)

ART 4D Figure Drawing I (4 units)

ART 4G Mural Making: Community Art Project (4 units)

ART 19A Oil Painting I (4 units)

ART 19B Acrylic Painting I (4 units)

ART 40 Introduction to Printmaking (4 units)  
 or GID 38 Introduction to Printmaking (4 units)

ART 47A Watercolor I (4 units)

And TWO courses from the following:

ART 4E Heads & Hands Drawing (4 units)

ART 4I Figure Drawing II (4 units)

ART 19C Oil Painting II (4 units)

ART 19D Acrylic Painting II (4 units)

ART 19E Oil Painting III (4 units)

ART 19F Acrylic Painting III (4 units)

ART 39 Screenprinting (4 units)

or GID 46 Screenprinting (4 units)

ART 47B Watercolor II (4 units)

ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)

or GID 61<sup>[2]</sup> Portfolio (4 units)

or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

Option 2: Ceramics Transfer Portfolio

Select TWO courses from the following:

ART 5B<sup>[3]</sup> 3-D Foundations (4 units)

or ART 45A<sup>[3]</sup> Beginning Ceramics Handbuilding (4 units)

ART 45B Beginning Ceramics Potter's Wheel (4 units)

And TWO courses from the following:

ART 44 Ceramic Sculpture (4 units)

ART 45C Advanced Ceramics (4 units)

ART 45F Low-Temperature Ceramic Firing & Glazing Techniques (4 units)

ART 46B Potter's Wheel II (4 units)

ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)

or GID 61<sup>[2]</sup> Portfolio (4 units)

or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

Option 3: Illustration Transfer Portfolio

Select TWO courses from the following:

ART 4B Intermediate Drawing (4 units)

ART 4C Representational Drawing (4 units)

ART 4D Figure Drawing I (4 units)

ART 4E Heads & Hands Drawing (4 units)

ART 15 Introduction to Illustration Techniques (4 units)

And TWO courses from the following:

ART 4I Figure Drawing II (4 units)

ART 6 Collage & Composition (4 units)

ART 15A Digital Painting I (4 units)

ART 15B Digital Painting II (4 units)

ART 15D Digital Illustration for Film & Animation (4 units)

ART 19A Oil Painting I (4 units)

ART 19B Acrylic Painting I (4 units)

ART 47A Watercolor I (4 units)

GID 43 Illustration & Digital Imaging (4 units)

ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)

or GID 61<sup>[2]</sup> Portfolio (4 units)

or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

Option 4: Industrial Design Transfer Portfolio

Select TWO courses from the following:

ART 4C Representational Drawing (4 units)

ART 74 Industrial Design Visualization I (4 units)

ART 74A Industrial Design Visualization II (4 units)

ART 76 History of Industrial Design (4 units)

And TWO courses from the following:

ART 5C Sculpture (4 units)

ART 71A Industrial Design Foundations I (4 units)

ART 71B Industrial Design Foundations II (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

ART 72<sup>[2]</sup> Studio Art Portfolio Preparation (4 units)  
 or GID 61<sup>[2]</sup> Portfolio (4 units)  
 or PHOT 57A<sup>[2]</sup> Photographic Portfolio Development (4 units)

<sup>[2]</sup> It is recommended that this portfolio course be taken at the end of the program as this is an exit portfolio course.

<sup>[3]</sup> May be completed only once for credit to satisfy either the core or support course requirement.

#### Certificate of Achievement in Art (54 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

## ART HISTORY

#### Program Type(s): Associate in Arts Degree, Certificate of Achievement

Units required for major: 48, certificate: 48

#### PROGRAM LEARNING OUTCOMES

- Students will be able to collect and assess primary and secondary source information and successfully analyze and comment on that information in the form of a reasoned 8-10 page term paper, complete with a full bibliography (works cited page), utilizing the MLA format.
- Students will be able to demonstrate in written form a strong awareness of the political, social, religious, and technological factors that influence cultures and change in those cultures.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (36 units)

ART 1<sup>[4]</sup> Introduction to Art (4.5 units)  
 ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Modernism (4.5 units)  
 ART 2E A History of Women in Art (4.5 units)  
 ART 2F Introduction to Asian Art (4.5 units)  
 ART 2J American Art (4.5 units)  
 ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)

<sup>[4]</sup> Recommended before taking Art History courses if no previous experience in art.

##### Support Courses: (12 units)

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ART 4A Fundamentals in Drawing (4 units)  
 or ART 5B 3-D Foundations (4 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

PHIL 24 Comparative World Religions: East (4 units)  
 or PHIL 25 Comparative World Religions: West (4 units)  
 PHIL 30 Introduction to Critical Thinking (4 units)  
 PHOT 10 History of Photography (4 units)  
 or PHOT 10H Honors History of Photography (4 units)

#### Certificate of Achievement in Art History (48 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

## ASSOCIATE DEGREE FOR TRANSFER-ART HISTORY

#### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to collect and assess primary and secondary source information and successfully analyze and comment on that information.
- Students will be able to demonstrate in written form a strong awareness of the political, social, religious and technological factors that influence cultures and change in those cultures.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (17.5 units)

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Modernism (4.5 units)  
 ART 4A Fundamentals in Drawing (4 units)

##### Support Courses: (12.5-17.5 units)

Select ONE course each from List A, List B and List C:

List A:

ART 2F Introduction to Asian Art (4.5 units)

List B:

ART 4B Intermediate Drawing (4 units)  
 ART 4D Figure Drawing I (4 units)  
 and<sup>[5]</sup> ART 4E Heads & Hands Drawing (4 units)  
 ART 5A 2-D Foundations (4 units)  
 ART 5B 3-D Foundations (4 units)  
 ART 19A Oil Painting I (4 units)  
 ART 19B Acrylic Painting I (4 units)  
 ART 44 Ceramic Sculpture (4 units)  
 ART 45A Beginning Ceramics Handbuilding (4 units)  
 GID 41 Digital Art & Graphics (4 units)  
 or ART 14D Digital Art & Graphics (4 units)  
 PHOT 1 Black & White Photography I (4 units)  
 or PHOT 5 Introduction to Photography (4 units)  
 PHOT 4A Photoshop for Photographers I (4 units)

<sup>[5]</sup> Both courses must be completed to fulfill the requirement.

## List C:

Any course not used in List A or List B, or any of the following:  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ART 1 Introduction to Art (4.5 units)  
 ART 2E A History of Women in Art (4.5 units)  
 ART 2J American Art (4.5 units)  
 ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
 HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
 HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
 JAPN 4 Intermediate Japanese I (5 units)  
 PHIL 11 Introduction to the Philosophy of Art & Aesthetics (4 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 PHIL 25 Comparative World Religions: West (4 units)  
 PHOT 8 Photography of Multicultural America (4 units)  
 or PHOT 8H Honors Photography of Multicultural America (4 units)  
 PHOT 10 History of Photography (4 units)  
 or PHOT 10H Honors History of Photography (4 units)  
 SPAN 4 Intermediate Spanish I (5 units)  
 THTR 26 Introduction to Fashion History & Costume Design (4 units)

## BIOLOGICAL SCIENCES

### Program Type(s): Associate in Science Degree

Units required for major: 48-54

#### PROGRAM LEARNING OUTCOMES

- The biology majors sequence prepares students to use the scientific method to formulate questions, design experiments to test hypotheses, interpret experimental results to draw conclusions, communicate results both orally and in writing, and critically evaluate the use of the scientific method from published sources.
- The biology majors sequence prepares students to apply evolutionary theory at the molecular, cellular, organismal and population levels to explain the unity and diversity of living things.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (48-54 units)

BIOL 1A Principles of Cell Biology (6 units)  
 BIOL 1B Form & Function in Plants & Animals (6 units)  
 BIOL 1C Evolution, Systematics & Ecology (6 units)  
 CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)

And select ONE option from the following:

Option #1: Organic Chemistry  
 CHEM 12A Organic Chemistry (4 units)  
 and CHEM 12AL Organic Chemistry Laboratory (2 units) or CHEM 13AH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12B Organic Chemistry (4 units)

and CHEM 12BL Organic Chemistry Laboratory (2 units) or CHEM 13BH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12C Organic Chemistry (4 units)  
 and CHEM 12CL Organic Chemistry Laboratory (2 units) or CHEM 13CH Honors Organic Chemistry Laboratory (3 units)

Option #2: Physics

PHYS 2A General Physics (5 units)

PHYS 2B General Physics (5 units)

PHYS 2C General Physics (5 units)

or

PHYS 4A General Physics (Calculus) (6 units)

PHYS 4B General Physics (Calculus) (6 units)

PHYS 4C General Physics (Calculus) (6 units)

## ASSOCIATE DEGREE FOR TRANSFER-BIOLOGY

### Program Type(s): Associate in Science for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to use the scientific process to formulate questions, design experiments to test hypotheses, interpret experimental results to draw conclusions, communicate results both orally and in writing, and critically evaluate the use of the scientific method from published sources.
- Students will be able to apply evolutionary theory at the molecular, cellular, organismal and population levels to explain the unity and diversity of living things.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (18 units)

BIOL 1A Principles of Cell Biology (6 units)  
 BIOL 1B Form & Function in Plants & Animals (6 units)  
 BIOL 1C Evolution, Systematics & Ecology (6 units)

##### Support Courses: (37-40 units)

CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units)

And complete ONE of the two sections below:

Section #1:

PHYS 2A General Physics (5 units)

and PHYS 2B General Physics (5 units)

and PHYS 2C General Physics (5 units)

Section #2:

PHYS 4A General Physics (Calculus) (6 units)

and PHYS 4B General Physics (Calculus) (6 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

## BUSINESS ADMINISTRATION

### Program Type(s): Associate in Arts Degree, Career Certificate [Non-Transcriptable]

Units required for major: 45, certificate: 18-24

### PROGRAM LEARNING OUTCOMES

- Students will demonstrate appropriate use of business terms and concepts across a standard breadth of business functions (R&D, Mfg, Sales, Mktg, Ops, IT, Acctg, Finance, etc.).
- Students will demonstrate appropriate use of analytical frameworks, methods, and skills in response to business questions, cases, and projects.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (33 units)

ACTG 1A Financial Accounting I (5 units)  
 BUSI 11 Introduction to Information Systems (5 units)  
 BUSI 18 Business Law I (5 units)  
 BUSI 22 Principles of Business (5 units)  
 or BUSI 22H Honors Principles of Business (5 units)  
 BUSI 59 Principles of Marketing (4 units)  
 BUSI 60 Fundamentals of Finance (5 units)  
 BUSI 90A Principles of Management (4 units)  
 or BUSI 95 Entrepreneurship-The Business Plan (4 units)

#### Support Courses: (12 units)

Select 12 units:

##### Accounting & Finance Courses

ACTG 1B Financial Accounting II (5 units)  
 or ACTG 1BH Honors Financial Accounting II (5 units)  
 ACTG 1C Managerial Accounting (5 units)  
 or ACTG 1CH Honors Managerial Accounting (5 units)  
 BUSI 61 Investment Fundamentals (3 units)

##### Marketing & Technology Courses

BUSI 53A Business Communications & Technologies (5 units)  
 BUSI 57 Principles of Advertising (4 units)  
 BUSI 59A Web Marketing (5 units)  
 BUSI 59B E-Business (5 units)  
 BUSI 62 Principles of Salesmanship (3 units)  
 BUSI 91L Introduction to Business Information Processing (4 units)

##### Business Law & Ethics Courses

ACTG 76 Ethics in Accounting (5 units)  
 BUSI 19 Business Law II (4 units)  
 BUSI 70 Business & Professional Ethics (4 units)

##### Management Courses

ACTG 1C Managerial Accounting (5 units)  
 or ACTG 1CH Honors Managerial Accounting (5 units)  
 BUSI 87 Human Resources Management (5 units)  
 BUSI 90A<sup>[6]</sup> Principles of Management (4 units)  
 BUSI 95<sup>[6]</sup> Entrepreneurship-The Business Plan (4 units)  
 BUSI 96 Entrepreneurship-Starting & Managing a Small Business (3 units)  
 ECON 1A Principles of Macroeconomics (5 units)

##### Other Applicable Courses

BUSI 53 Survey of International Business (4 units)  
 BUSI 54H Honors Institute Seminar in Business (1 unit)

BUSI 70R Independent Study in Business (1 unit)  
 BUSI 71R Independent Study in Business (2 units)  
 BUSI 72R Independent Study in Business (3 units)  
 BUSI 73R Independent Study in Business (4 units)  
 ECON 1B Principles of Microeconomics (5 units)  
 GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
 or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)

<sup>[6]</sup> May be completed only once for credit to satisfy either the core or support course requirement.

### Business Management Career Certificate (22-24 units) [Non-Transcriptable]

BUSI 90A Principles of Management (4 units)  
 or BUSI 95 Entrepreneurship-The Business Plan (4 units)

And TWO courses from the following:

BUSI 18 Business Law I (5 units)  
 BUSI 53 Survey of International Business (4 units)  
 BUSI 70 Business & Professional Ethics (4 units)  
 BUSI 87 Human Resources Management (5 units)

And TWO courses from the following:

ACTG 1C Managerial Accounting (5 units)  
 or ACTG 1CH Honors Managerial Accounting (5 units)  
 BUSI 53A Business Communications & Technologies (5 units)  
 BUSI 59A Web Marketing (5 units)  
 BUSI 60 Fundamentals of Finance (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

### Financial Literacy Career Certificate (18 units) [Non-Transcriptable]

BUSI 60 Fundamentals of Finance (5 units)  
 BUSI 61 Investment Fundamentals (3 units)

And TWO courses from the following:

ACTG 1A Financial Accounting I (5 units)  
 ACTG 67 Tax Accounting (5 units)  
 BUSI 53A Business Communications & Technologies (5 units)

Note: Non-transcriptable certificates are maintained and awarded by the Business Department (not the college) and not recorded in student transcripts. To apply for certificate, contact the department's Chair within one academic year from completing the last course.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.



## ASSOCIATE DEGREE FOR TRANSFER-BUSINESS ADMINISTRATION

### Program Type(s): Associate in Science for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will develop skills to interpret resource allocation through research in basic financial literacy skills (computation, critical thinking skills), by analyzing the data with understanding of communication/ leadership local and in the global sphere of the business world. This is accomplished in writing and in their oral presentations.
- As a result of these basic business experiences, students will develop strategies on to which area of business they may enter.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (30 units)

ACTG 1A Financial Accounting I (5 units)  
 ACTG 1B Financial Accounting II (5 units)  
 or ACTG 1BH Honors Financial Accounting II (5 units)  
 ACTG 1C Managerial Accounting (5 units)  
 or ACTG 1CH Honors Managerial Accounting (5 units)  
 BUSI 18 Business Law I (5 units)  
 ECON 1A Principles of Macroeconomics (5 units)  
 ECON 1B Principles of Microeconomics (5 units)

##### Support Courses: (14-15 units)

Complete #1 or #2 from List A:

List A:

1. MATH 12<sup>[7]</sup> Calculus for Business & Economics (5 units)
  2. MATH 10 Elementary Statistics (5 units)
- or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)

And complete TWO courses from List B:

List B:

BUSI 11 Introduction to Information Systems (5 units)  
 or BUSI 91L Introduction to Business Information Processing (4 units)  
 BUSI 22 Principles of Business (5 units)  
 or BUSI 22H Honors Principles of Business (5 units)  
 1.<sup>[8]</sup> MATH 12<sup>[7]</sup> Calculus for Business & Economics (5 units)  
 2.<sup>[8]</sup> MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)

<sup>[7]</sup> MATH 1A or MATH 1AH may be substituted for MATH 12.

<sup>[8]</sup> If not previously completed for List A. NOTE: for #2, only one course is permitted from: MATH 10, PSYC 7, SOC 7.

- Students will have an enhanced ability to communicate effectively, both orally and in writing.
- Students will have facility in the safe handling of chemicals and the execution of common laboratory techniques.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (60-63 units)

CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 CHEM 12A Organic Chemistry (4 units)  
 and CHEM 12AL Organic Chemistry Laboratory (2 units) or CHEM 13AH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12B Organic Chemistry (4 units)  
 and CHEM 12BL Organic Chemistry Laboratory (2 units) or CHEM 13BH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12C Organic Chemistry (4 units)  
 and CHEM 12CL Organic Chemistry Laboratory (2 units) or CHEM 13CH Honors Organic Chemistry Laboratory (3 units)

And THREE courses from the following:

MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)

And TWO courses from the following:

PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)  
 PHYS 4D General Physics (Calculus) (6 units)

## CHEMISTRY

### Program Type(s): Associate in Science Degree

Units required for major: 60-63

#### PROGRAM LEARNING OUTCOMES

- Students will have knowledge of current theories and applications in the field of chemistry.
- Students will have an enhanced ability to research, assess and evaluate topics of interest.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

## CHILD DEVELOPMENT

### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Certificate of Specialization [Non-Transcriptable]

May be transferrable to a four-year university.

Units required for major: 49, certificate: 23-85

### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate understanding of the needs and characteristics of children from birth through middle childhood, and the multiple influences on their development as related to the high-quality care and education of young children.
- Students will be able to demonstrate understanding of ethical standards and professional behaviors that deepen knowledge and commitment to the field of early care and education as related to National Association for the Education of Young Children Code of Ethical Conduct.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (43 units)

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)

CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)

CHLD 51A Affirming Diversity in Education (4 units)

CHLD 56 Observation & Assessment (4 units)

CHLD 56N Principles & Practices of Teaching Young Children (4 units)

CHLD 86A Mentoring the Early Care & Education Professional (4 units)

CHLD 86B Practicum Student Teaching in an Early Childhood Program (5 units)

CHLD 88 Child, Family & Community (4 units)

CHLD 88B Positive Behavior Management (2 units)

CHLD 89 Curriculum for Early Care & Education Programs (4 units)

CHLD 95 Health, Safety & Nutrition in Children's Programs (4 units)

#### Support Courses: (6 units)

Select at least 6 units from the following:

CHLD 50A Infant/Toddler Development (3 units)

CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)

CHLD 53NP Development of Children with Special Needs (3 units)

CHLD 54A Developing a Healthy Organizational Climate in Education (1 unit)

CHLD 54B The Right Fit: Recruiting, Selecting & Orienting Staff (1 unit)

CHLD 54C Leadership in Action: How Effective Directors Get Things Done (1 unit)

CHLD 54D From the Inside Out: The Power of Reflection & Self-Awareness (1 unit)

CHLD 59 Working with School-Age Children (4 units)

CHLD 63N Artistic & Creative Development (3 units)

CHLD 71 Planning Creative Art Activities for Children (1 unit)

CHLD 72 Language, Literacy & The Developing Child (3 units)

CHLD 73 Music & Movement in the Early Years (2 units)

CHLD 74 Science & Nature (1 unit)

CHLD 79 Caring for Infants & Toddlers in Groups (3 units)

CHLD 82 Planning Creative Dramatics (1 unit)

CHLD 90B Administration & Supervision of Children's Programs Part I (4 units)

CHLD 90C Administration & Supervision of Children's Programs Part II (4 units)

CHLD 91 Administration & Supervision: Adult Supervision & Leadership (4 units)

ANTH 2A Cultural Anthropology (4 units)

or ANTH 2AH Honors Cultural Anthropology (4 units)

ENGL 8 Children's Literature (4 units)

PSYC 14 Child & Adolescent Development (4 units)

SOC 40 Aspects of Marriage & Family (4 units)

### Certificate of Achievement in Child Development Teacher (73 units)

This certificate prepares future early childhood educators to work with diverse children in early childhood settings. The program includes academic instruction, job skills training, and field experiences. Students develop skills in integrating developmentally appropriate practices in teaching young children and acquire abilities in building relationships with children and their families.

This certificate fulfills course requirements to qualify as a teacher in an early childhood development program licensed by the Department of Social Services. It also meets the course requirements for the California Commission on Teacher Credentialing Child Development Teacher Permit and Child Development Associate Teacher Permit.

This certificate is awarded upon completion of the core and support courses and 24 units of general education courses (at least one course from each of the following categories):

1. Humanities and/or Fine Arts
2. Social Sciences
3. English/Language Arts
4. Mathematics or Science

### Certificate of Achievement in Program Supervision and Mentoring (85 units)

This certificate prepares future early childhood educators to direct and supervise an early childhood development program; provide care, education and instruction of children in an early childhood development program; and serve as coordinator of curriculum, instruction and staff development.

This certificate fulfills course requirements to qualify as a director in an early childhood development program licensed by the Department of Social Services. It also meets the course requirements for the California Commission on Teacher Credentialing Site Supervisor Permit.

This certificate is awarded upon the completion of the Certificate of Achievement in Child Development Teacher (73 units)

AND the following:

CHLD 90B Administration & Supervision of Children's Programs Part I (4 units)

CHLD 90C Administration & Supervision of Children's Programs Part II (4 units)

CHLD 91 Administration & Supervision: Adult Supervision & Leadership (4 units)

### Early Childhood Education Certificate of Specialization (25 units) [Non-Transcriptable]

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (4 units)

**School-Age Child Care Certificate of Specialization (25 units)**  
**[Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 59 Working with School-Age Children (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (4 units)

**Inclusion and Children with Special Needs Certificate of Specialization (24 units)**  
**[Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)  
 CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 53NP Development of Children with Special Needs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)

**Infant Toddler Development Certificate of Specialization (23 units)**  
**[Non-Transcriptable]**

This certificate meets the requirements for the California Commission on Teacher Credentialing Child Development Associate Teacher Permit. There are no English or mathematics proficiency requirements for this certificate.

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)  
 CHLD 50A Infant/Toddler Development (3 units)  
 CHLD 53NC Supporting Children with Special Needs in Children's Programs (3 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 79 Caring for Infants & Toddlers in Groups (3 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 88B Positive Behavior Management (2 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## COMMUNICATION STUDIES

**Program Type(s): Associate in Arts Degree, Certificate of Proficiency [Non-Transcriptable], Certificate of Specialization [Non-Transcriptable]**  
 Units required for major: 30, certificate: 15-20

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify patterns of communication in a variety of contexts.
- Students will be able to utilize appropriate methods of communication in critical thinking and/or communication situations.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (15 units)

COMM 1A Public Speaking (5 units)  
 or COMM 1AH Honors Public Speaking (5 units)  
 COMM 2 Interpersonal Communication (5 units)  
 COMM 4 Group Discussion (5 units)

#### Support Courses: (15 units)

Select 15 units from the following:  
 COMM 1B Argumentation & Persuasion (5 units)  
 or COMM 1BH Honors Argumentation & Persuasion (5 units)  
 COMM 3 Introduction to Communication Studies (5 units)  
 COMM 10 Gender, Communication & Culture (5 units)  
 COMM 12 Intercultural Communication (5 units)  
 COMM 54A Forensic Speech (5 units)  
 COMM 55 Career & Leadership Communication in the Global Workplace (5 units)  
 JRNL 2 Mass Communication (5 units)

#### Communication Studies Certificate of Specialization (20 units)

**[Non-Transcriptable]**

COMM 10<sup>[9]</sup> Gender, Communication & Culture (5 units)  
 or COMM 12<sup>[9]</sup> Intercultural Communication (5 units)

And ONE course from the following:

COMM 1B<sup>[9]</sup> Argumentation & Persuasion (5 units)  
 or COMM 1BH<sup>[9]</sup> Honors Argumentation & Persuasion (5 units)  
 COMM 55<sup>[9]</sup> Career & Leadership Communication in the Global Workplace (5 units)

And TWO courses from the following:

COMM 1A Public Speaking (5 units)  
 or COMM 1AH Honors Public Speaking (5 units)  
 COMM 1B<sup>[9]</sup> Argumentation & Persuasion (5 units)  
 or COMM 1BH<sup>[9]</sup> Honors Argumentation & Persuasion (5 units)  
 COMM 2 Interpersonal Communication (5 units)  
 COMM 3 Introduction to Communication Studies (5 units)  
 COMM 4 Group Discussion (5 units)  
 COMM 10<sup>[9]</sup> Gender, Communication & Culture (5 units)  
 COMM 12<sup>[9]</sup> Intercultural Communication (5 units)  
 COMM 54A Forensic Speech (5 units)  
 COMM 55<sup>[9]</sup> Career & Leadership Communication in the Global Workplace (5 units)

<sup>[9]</sup> May be completed only once for credit to satisfy certificate requirements.

**Communication Studies Certificate of Proficiency (15 units)****[Non-Transcriptable]**

COMM 1A<sup>[9]</sup> Public Speaking (5 units)  
 or COMM 1AH<sup>[9]</sup> Honors Public Speaking (5 units)  
 or COMM 2<sup>[9]</sup> Interpersonal Communication (5 units)

And TWO courses from the following:

COMM 1A<sup>[9]</sup> Public Speaking (5 units)  
 or COMM 1AH<sup>[9]</sup> Honors Public Speaking (5 units)  
 COMM 1B Argumentation & Persuasion (5 units)  
 or COMM 1BH Honors Argumentation & Persuasion (5 units)  
 COMM 2<sup>[9]</sup> Interpersonal Communication (5 units)  
 COMM 3 Introduction to Communication Studies (5 units)  
 COMM 4 Group Discussion (5 units)  
 COMM 10 Gender, Communication & Culture (5 units)  
 COMM 12 Intercultural Communication (5 units)  
 COMM 54A Forensic Speech (5 units)  
 COMM 55 Career & Leadership Communication in the Global Workplace (5 units)

<sup>[9]</sup> May be completed only once for credit to satisfy certificate requirements.

**ASSOCIATE DEGREE FOR TRANSFER-COMMUNICATION STUDIES****Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to identify patterns of communication in a variety of contexts.
- Students will be able to utilize appropriate methods of communication in critical thinking and/or communication situations.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (5 units)**

COMM 1A Public Speaking (5 units)  
 or COMM 1AH Honors Public Speaking (5 units)

**Support Courses: (24-25 units)**

Complete TWO courses from List A:

List A:  
 COMM 1B Argumentation & Persuasion (5 units)  
 or COMM 1BH Honors Argumentation & Persuasion (5 units)  
 COMM 2 Interpersonal Communication (5 units)  
 COMM 4 Group Discussion (5 units)

And complete TWO courses from List B (or any course from List A not used above):

List B:  
 COMM 3 Introduction to Communication Studies (5 units)  
 COMM 12 Intercultural Communication (5 units)  
 JRNL 2 Mass Communication (5 units)

And complete ONE course from List C (or any course from List A or B not used above):

List C:  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

COMM 10 Gender, Communication & Culture (5 units)  
 or COMM 55 Career & Leadership Communication in the Global Workplace (5 units)  
 ENGL 16 Introduction to Literature (4 units)  
 JRNL 22A Introduction to Reporting & Newswriting (5 units)  
 PSYC 1 General Psychology (5 units)  
 or PSYC 1H Honors General Psychology (5 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)

**COMPUTER SCIENCE****Program Type(s): Associate in Science Degree, Certificate of Proficiency [Non-Transcriptable]**

Units required for major: 58, certificate: 23

**PROGRAM LEARNING OUTCOMES**

- Students will be able to use standard software engineering tools to create reusable code.
- Students will be able to design a large program that takes advantage of existing code libraries.
- Students will be able to organize a complex program in a logical way, enabling the extension of the program.
- Students will be able to comprehend user requirements and produce code and documentation in an industry-accepted style that satisfies those requirements.
- Students will be able to develop software that solves problems in a variety of fields, including math, physics, chemistry, biology, astronomy, business, and the Internet.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (38 units)**

C S 10 Computer Architecture & Organization (4.5 units)  
 MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 22 Discrete Mathematics (5 units)  
 or C S 18 Discrete Mathematics (5 units)

And select ONE option from the following:

Option #1: Java  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 1B Intermediate Software Design in Java (4.5 units)  
 C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)

Option #2: C++  
 C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)  
 C S 2B Intermediate Software Design in C++ (4.5 units)  
 C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)

Option #3: Python  
 C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)



C S 3B Intermediate Software Design in Python (4.5 units)  
 C S 3C Advanced Data Structures & Algorithms in Python (4.5 units)

### Support Courses: (20 units)

Select 20 units from the following:

BIOL 1A Principles of Cell Biology (6 units)  
 BIOL 1B Form & Function in Plants & Animals (6 units)  
 BIOL 1C Evolution, Systematics & Ecology (6 units)  
 C S 2M Intermediate Algorithm & Data Structure Methodologies in C++ (4.5 units)  
 C S 19A Theory of Quantum Computing I (5 units)  
 C S 19B Theory of Quantum Computing II (5 units)  
 C S 20A Programming in C# (4.5 units)  
 C S 21A Python for Programmers (4.5 units)  
 C S 21B Intermediate Python Programming (4.5 units)  
 C S 22A JavaScript for Programmers (4.5 units)  
 C S 26A Ruby & Functional Programming (4.5 units)  
 C S 30A Introduction to Linux (4.5 units)  
 C S 30B Linux Shell Programming (4.5 units)  
 C S 30C Linux System Administration (4.5 units)  
 C S 30D Advanced Linux System Administration (4.5 units)  
 C S 30E Linux System Administration: Network Services (4.5 units)  
 C S 31A Introduction to Database Management Systems (4.5 units)  
 C S 40A Software Engineering Methodologies (4.5 units)  
 C S 49 Foundations of Computer Programming (2 units)  
 C S 50A Network Basics (CCNA) (4.5 units)  
 C S 63A Developing Applications for iOS (4.5 units)  
 C S 64A Writing Apps for the Android in Java (4.5 units)  
 C S 71A Data Analytics & Management (4.5 units)  
 C S 80A Open Source Contribution (4.5 units)  
 C S 81A 3-D Graphics Programming (4.5 units)  
 C S 82A Introduction to Software Quality Assurance (4.5 units)  
 C S 84A Database-Driven Web Application Development (4.5 units)  
 C S 84B Distributed Databases (4.5 units)  
 CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)  
 MATH 2B Linear Algebra (5 units)  
 PHYS 2A General Physics (5 units)  
 PHYS 2AM General Physics: Calculus Supplement (1 unit)  
 PHYS 2B General Physics (5 units)  
 PHYS 2BM General Physics: Calculus Supplement (1 unit)  
 PHYS 2C General Physics (5 units)  
 PHYS 2CM General Physics: Calculus Supplement (1 unit)  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)

### Mobile Applications Certificate of Proficiency (23 units)

#### [Non-Transcriptable]

There is no minimum English proficiency required for this certificate.

C S 10 Computer Architecture & Organization (4.5 units)  
 C S 18 Discrete Mathematics (5 units)  
 or MATH 22 Discrete Mathematics (5 units)  
 C S 40A Software Engineering Methodologies (4.5 units)  
 C S 63A<sup>[10]</sup> Developing Applications for iOS (4.5 units)  
 or C S 64A<sup>[10]</sup> Writing Apps for the Android in Java (4.5 units)

And ONE course from the following:

C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)  
 C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)  
 C S 22A JavaScript for Programmers (4.5 units)  
 C S 30B Linux Shell Programming (4.5 units)  
 C S 63A<sup>[10]</sup> Developing Applications for iOS (4.5 units)  
 C S 64A<sup>[10]</sup> Writing Apps for the Android in Java (4.5 units)  
 C S 80A Open Source Contribution (4.5 units)  
 C S 81A 3-D Graphics Programming (4.5 units)

<sup>[10]</sup> May be completed only once for credit to satisfy certificate requirements.

## ASSOCIATE DEGREE FOR TRANSFER-COMPUTER SCIENCE

### Program Type(s): Associate in Science for Transfer Degree

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Use of standard software engineering tools to create reusable code.
- Design of large programs that take advantage of existing code libraries.
- Organization of complex programs in a logical way, enabling the extension of the program.
- Comprehension of user requirements, and production of code and documentation in an industry-accepted style that satisfies those requirements.
- Development of software that solves problems in a variety of fields, including math, physics, chemistry, biology, astronomy, business, and the Internet.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (45.5 units)

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 1M<sup>[11]</sup> Intermediate Algorithm & Data Structure Methodologies in Java (4.5 units)  
 C S 10 Computer Architecture & Organization (4.5 units)  
 C S 18 Discrete Mathematics (5 units)  
 or MATH 22 Discrete Mathematics (5 units)  
 MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units)  
 MATH 1C Calculus (5 units)  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)

<sup>[11]</sup> C S 1B & 1C or C S 2B & 2C may be substituted for C S 1M.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

**DENTAL ASSISTING****Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 57.5, certificate: 57.5

**PROGRAM LEARNING OUTCOMES**

- Graduates will demonstrate entry-level competency skills mandated by the Commission on Dental Accreditation and the Dental Board of California.
- Graduates will value and implement proper radiation safety for patients, self, and others.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (57.5 units)**

Fall

- D A 50 Orientation to Dental Assisting (2.5 units)
- D A 51A Introduction to Chairside Dental Assisting (10.5 units)
- D A 53A Introduction to Radiography I (3 units)
- D A 58 Specialty Practice Procedures (1 unit)
- D A 62A Dental Sciences I (2 units)
- D A 71 Infection Control & Hazardous Waste Management (1.5 units)

Winter

- D A 51B Intermediate Clinical Dental Assisting (3 units)
- D A 53B Dental Radiography II (2 units)
- D A 56 Dental Health Education (1 unit)
- D A 57 Office Emergency Procedures (2 units)
- D A 60A Dental Office Business Practices I (2 units)
- D A 62B Dental Sciences II (2 units)
- D A 73 Dental Assisting Supervised Clinic (5.5 units)

Spring

- D A 51C Advanced Dental Assisting Skills (3.5 units)
- D A 53C Dental Radiography III (1 unit)
- D A 60B Dental Office Business Practices II (3 units)
- D A 62C Dental Sciences III (2 units)
- D A 63 Special Patient Populations (1 unit)
- D A 74 Dental Assisting Clinical Practice (5.5 units)
- D A 85 RDA Review (2 units)
- D A 88 Pit & Fissure Sealants (1.5 units)

**Certificate of Achievement in Dental Assisting (57.5 units)**

The certificate of achievement is awarded upon completion of the core courses (general education courses are not required) and the following:

- Cardiopulmonary Resuscitation Certificate (Health Care Provider, American Heart Association or Professional Rescuer American Red Cross).
- Completion of ENGL 209 or ESLL 236 & ESLL 237 or equivalent.
- Completion of MATH 230 or equivalent on the mathematics placement test.

**DENTAL HYGIENE****Program Type(s): Bachelor in Science Degree**

Units required for major: 196.5

**PROGRAM LEARNING OUTCOMES**

- Professionalism: The dental hygiene bachelor in science degree graduate will have the skills to implement his/her role as a health professional at the local, state, and national levels. The graduate will possess the ethics, values, skills, and knowledge integral to all aspects of the profession.
- Health Promotion and Disease Prevention: The dental hygiene bachelor in science degree graduate will be competent in the performance and delivery of oral health promotion and disease prevention services in public health, private practice and alternative settings. The graduate will be able to exercise evidence-based practice, critical thinking and communicate effectively in all professional employment settings.

**BACHELOR DEGREE REQUIREMENTS \*****Core Courses: (92 units)****FIRST YEAR**

Summer

- D H 50 Orientation to Dental Hygiene (1 unit)

Fall

- D H 300A Oral Biology I (3 units)
- D H 302 Assessment Procedures in Dental Hygiene (3 units)
- D H 304 Pre-Clinical Dental Hygiene (5 units)
- D H 305A Introduction to Dental Radiography I (2 units)
- IDS 300<sup>[12]</sup> Research Methodology for Health Professionals (5 units)

Winter

- D H 300B Oral Biology II (3 units)
- D H 305B Dental Radiography II (1 unit)
- D H 308 Clinical Technique (6 units)
- D H 310 Dental Materials (3 units)
- D H 312 Emergency Procedures (1 unit)
- D H 314 Dental Health Education (2 units)

Spring

- D H 305C Dental Radiography III (2 units)
- D H 316A Periodontics I (3 units)
- D H 318 Introduction to Clinic (5 units)
- BIOL 300<sup>[12]</sup> Human Pathophysiology & Pharmacology (4 units)
- HLTH 300<sup>[12]</sup> Health Across the Lifespan (5 units)

**SECOND YEAR**

Summer

- D H 320A Clinical Dental Hygiene I (3 units)
- D H 322 Local Anesthesia (2.5 units)

Fall

- D H 316B Periodontics II (2 units)
- D H 320B Clinical Dental Hygiene II (8.5 units)
- D H 324 Oral Pathology (2 units)
- D H 326A Community Dental Health I (2 units)
- D H 328A Clinical Dental Hygiene Theory I (2 units)

Winter

- D H 305D Dental Radiography IV (1 unit)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

D H 320C Clinical Dental Hygiene III (8.5 units)  
 D H 326B Community Dental Health II (2 units)  
 D H 328B Clinical Dental Hygiene Theory II (2 units)  
 D H 330 Nitrous Oxide/Oxygen Analgesia (1 unit)

#### Spring

D H 320D Clinical Dental Hygiene IV (8.5 units)  
 D H 326C Community Dental Health III (2 units)  
 D H 328C Clinical Dental Hygiene Theory III (2 units)  
 D H 332 Ethics, Law & Business Practices (3 units)

<sup>[12]</sup> Upper Division General Education courses.

## DIAGNOSTIC MEDICAL SONOGRAPHY

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 116.5, certificate: 116.5

#### PROGRAM LEARNING OUTCOMES

- Students will demonstrate the necessary knowledge, technical skills, analytical skills, interpersonal skills and diagnostic ability within the scope of practice for diagnostic medical sonography.
- Students will demonstrate the necessary knowledge and values pertaining to professional demeanor, including the implementation of confidentiality and privacy for the practice of diagnostic medical sonography.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (116.5 units)

#### Fall

AHS 50A Introduction to Allied Health Programs (1.5 units)  
 DMS 50A Diagnostic Medical Sonography Principles & Protocols (4 units)  
 DMS 50B Sonography & Patient Care (2 units)  
 DMS 60A Critique & Pathology I (2 units)  
 DMS 72A Diagnostic Medical Sonography Procedures & Applications (11.5 units)

#### Winter

DMS 51A Sectional Anatomy (3 units)  
 DMS 53A Diagnostic Medical Sonography I (2 units)  
 DMS 54A Gynecology (2 units)  
 DMS 60B Critique & Pathology II (2 units)  
 DMS 70A Clinical Preceptorship I (11.5 units) (32 hrs/wk for 13 wks)

#### Spring

DMS 52A Physical Principles of Diagnostic Medical Sonography I (2 units)  
 DMS 53B Diagnostic Medical Sonography II (2 units)  
 DMS 54B Gynecology & Obstetrics (2 units)  
 DMS 60C Critique & Pathology III (2 units)  
 DMS 70B Clinical Preceptorship II (10.5 units) (32 hrs/wk for 12 wks)

#### Summer

DMS 52B Physical Principles of Diagnostic Medical Sonography II (2 units)  
 DMS 53C Diagnostic Medical Sonography III (2 units)  
 DMS 55A Obstetrics I (2 units)

DMS 60D Critique & Pathology IV (2 units)  
 DMS 70C Clinical Preceptorship III (9.5 units) (32 hrs/wk for 11 wks)

#### Fall

DMS 55B Obstetrics II (2 units)  
 DMS 56A Vascular Sonography (3 units)  
 DMS 60E Critique & Pathology V (2 units)  
 DMS 70D Clinical Preceptorship IV (11.5 units) (32 hrs/wk for 13 wks)

#### Winter

DMS 52C Physical Principles of Diagnostic Medical Sonography III (2 units)  
 DMS 56B Advanced Applications of Vascular Technology (2 units)  
 DMS 60F Critique & Pathology VI (2 units)  
 DMS 70E Clinical Preceptorship V (10.5 units) (32 hrs/wk for 12 wks)  
 DMS 80A Advanced Sonographic Principles (4 units)

### Certificate of Achievement in Diagnostic Medical Sonography (116.5 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required; however, the prerequisites and application requirements must be met.

## ASSOCIATE DEGREE FOR TRANSFER-EARLY CHILDHOOD EDUCATION

### Program Type(s): Associate in Science for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate understanding of the needs and characteristics of children from birth through middle childhood and the multiple influences on their development as related to the high-quality care and education of young children.
- Students will be able to demonstrate understanding of ethical standards and professional behaviors that deepen knowledge and commitment to the field of early care and education as related to National Association for the Education of Young Children Code of Ethical Conduct.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (37 units)

CHLD 1 Child Growth & Development: Prenatal through Early Childhood (4 units)  
 CHLD 2 Child Growth & Development II: Middle Childhood through Adolescence (4 units)  
 CHLD 51A Affirming Diversity in Education (4 units)  
 CHLD 56 Observation & Assessment (4 units)  
 CHLD 56N Principles & Practices of Teaching Young Children (4 units)  
 CHLD 86B Practicum Student Teaching in an Early Childhood Program (5 units)  
 CHLD 88 Child, Family & Community (4 units)  
 CHLD 89 Curriculum for Early Care & Education Programs (4 units)  
 CHLD 95 Health, Safety & Nutrition in Children's Programs (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

## ECONOMICS

### Program Type(s): Associate in Arts Degree

Units required for major: 30

#### PROGRAM LEARNING OUTCOMES

- Students will have a working understanding of the role of prices in a market economy, the benefits of trade, economic growth and stability, market structures and competition, market failures and the economic role of government.
- Students will be able to employ economic reasoning to explain the world around them and make objective decisions based on assessments of costs and benefits.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (18 units)

ECON 1A Principles of Macroeconomics (5 units)  
 ECON 1B Principles of Microeconomics (5 units)  
 ECON 9 Political Economy (4 units)  
 or ECON 9H Honors Political Economy (4 units)  
 or POLI 9 Political Economy (4 units)  
 or POLI 9H Honors Political Economy (4 units)  
 ECON 25 The Global Economy (4 units)

##### Support Courses: (12 units)

Select 12 units from the following:  
 BUSI 53 Survey of International Business (4 units)  
 GEOG 5 Introduction to Economic Geography (4 units)  
 or GEOG 10 World Regional Geography (4 units)  
 MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 PSYC 10 Research Methods & Designs (5 units)  
 or SOC 10 Research Methods & Designs (5 units)  
 ECON 54H Honors Institute Seminar in Economics (1 unit)  
 ECON 70R Independent Study in Economics (1 unit)  
 ECON 71R Independent Study in Economics (2 units)  
 ECON 72R Independent Study in Economics (3 units)  
 ECON 73R Independent Study in Economics (4 units)

ECON 1B Principles of Microeconomics (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 MATH 12 Calculus for Business & Economics (5 units)  
 or MATH 1A Calculus (5 units) and<sup>[13]</sup> MATH 1B Calculus (5 units)  
 or MATH 1A Calculus (5 units) and<sup>[13]</sup> MATH 1BH Honors Calculus II (5 units)  
 or MATH 1AH Honors Calculus I (5 units) and<sup>[13]</sup> MATH 1B Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units) and<sup>[13]</sup> MATH 1BH Honors Calculus II (5 units)

##### Support Courses: (9-20 units)

Complete ONE course from List A:

List A:

ACTG 1A Financial Accounting I (5 units)  
 and<sup>[13]</sup> ACTG 1B Financial Accounting II (5 units) or ACTG 1BH Honors Financial Accounting II (5 units)  
 ACTG 1C Managerial Accounting (5 units)  
 or ACTG 1CH Honors Managerial Accounting (5 units)  
 MATH 11 Finite Mathematics (5 units)  
 MATH 1B Calculus (5 units) and<sup>[13]</sup> MATH 1C Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units) and<sup>[13]</sup> MATH 1C Calculus (5 units)

And complete ONE course from List B:

List B:

Any course not used in List A, or any of the following:  
 ECON 9 Political Economy (4 units)  
 or POLI 9 Political Economy (4 units)  
 or ECON 9H Honors Political Economy (4 units)  
 or POLI 9H Honors Political Economy (4 units)  
 ECON 25 The Global Economy (4 units)  
 MATH 1C Calculus (5 units) and<sup>[13]</sup> MATH 1D Calculus (5 units)  
 MATH 2B Linear Algebra (5 units)

<sup>[13]</sup> Both courses must be completed to fulfill the requirement.

## ASSOCIATE DEGREE FOR TRANSFER-ECONOMICS

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will have a working understanding of the role of prices in a market economy, the benefits of trade, economic growth and stability, market structures and competition, market failures and the economic role of government.
- Students will be able to employ economic reasoning to explain the world around them and make objective decisions based on assessments of costs and benefits.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (20-25 units)

ECON 1A Principles of Macroeconomics (5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.



**ENGINEERING****Program Type(s): Associate in Science Degree**

Units required for major: 68

**PROGRAM LEARNING OUTCOMES**

- Students will be able to formulate logical problem-solving approaches, generate solutions, and assess the reasonableness of the solutions for engineering-type analysis problems.
- Students will be able to design, construct, and produce creative solutions to engineering problems by applying the engineering design process and identifying pertinent design parameters based on the fundamental physics governing a system.
- Students will be able to demonstrate understanding of the fundamental knowledge necessary for the practice of, or for advanced study in, engineering, including scientific principles, rigorous analysis, and problem solving.
- Students will be able to demonstrate clear communication skills, responsible teamwork, professional attitudes and ethics.
- Students will be able to demonstrate a preparation for the complex work environment and continuous learning.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (53 units)**

CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 ENGR 10 Introduction to Engineering (5 units)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)

**Support Courses: (15 units)**

Select 15 units from the following:

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)  
 C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
 C S 10 Computer Architecture & Organization (4.5 units)  
 ENGR 6 Engineering Graphics (4 units)  
 ENGR 11 Programming & Problem-Solving in MATLAB (5 units)  
 ENGR 35 Statics (5 units)  
 ENGR 37 Introduction to Circuit Analysis (5 units)  
 ENGR 45 Properties of Materials (5 units)  
 MATH 2B Linear Algebra (5 units)  
 NANO 10 Introduction to Nanotechnology (5 units)  
 PHYS 4D General Physics (Calculus) (6 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

**ENGLISH****Program Type(s): Associate in Arts Degree**

Units required for major: 27-30

**PROGRAM LEARNING OUTCOMES**

- Students will be able to compose a thesis-based essay that clearly communicates a logical, evidence-supported argument.
- Students will demonstrate, in writing, comprehension and critical analysis of college-level texts.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (15-19 units)**

Select ONE of the following options:

## Option 1:

ENGL 1B Composition, Critical Reading & Thinking through Literature (5 units)  
 or ENGL 1BH Honors Composition, Critical Reading & Thinking through Literature (5 units)

## Option 2:

ENGL 1C Argumentative Writing & Critical Thinking (5 units)  
 or ENGL 1CH Honors Argumentative Writing & Critical Thinking (5 units)  
 ENGL 16 Introduction to Literature (4 units)

And, for either option, select any TWO courses from the following:  
 ENGL 43A Survey of British Literature I: Beowulf to the Late 18th Century (5 units)  
 or ENGL 43AH Honors Survey of British Literature I: Beowulf to the Late 18th Century (5 units)  
 ENGL 43B Survey of British Literature II: The Romantic Period to the Present (5 units)  
 or ENGL 43BH Honors Survey of British Literature II: The Romantic Period to the Present (5 units)  
 ENGL 45A Survey of American Literature I: Beginnings to 1865 (5 units)  
 or ENGL 45AH Honors Survey of American Literature I: Beginnings to 1865 (5 units)  
 ENGL 45B Survey of American Literature II: 1865 to the Present (5 units)  
 or ENGL 45BH Honors Survey of American Literature II: 1865 to the Present (5 units)  
 ENGL 47A World Literature I (5 units)  
 or ENGL 47AH Honors World Literature I (5 units)  
 ENGL 47B World Literature II (5 units)  
 or ENGL 47BH Honors World Literature II (5 units)

**Support Courses: (8-15 units)**

For Option 1, select THREE courses from the following, of which TWO courses must be Literature<sup>[14]</sup> courses (minimum of 12 units<sup>[15]</sup>):  
 For Option 2, select TWO courses from the following, of which ONE course must be a Literature<sup>[14]</sup> course (minimum of 8 units<sup>[15]</sup>):

Any of the following, if not used to fulfill the core course requirement:  
 ENGL 1B, ENGL 1BH, ENGL 1C, ENGL 1CH  
 ENGL 50C Technical Writing (5 units)  
 CRWR 6 Introduction to Creative Writing (5 units)  
 CRWR 25A Poetry in Community (5 units)  
 CRWR 39A Introduction to Short Fiction Writing (5 units)  
 CRWR 39B Advanced Short Fiction Writing (5 units)  
 CRWR 41A Poetry Writing (5 units)  
 CRWR 41B Advanced Poetry Writing (5 units)

Literature Courses<sup>[14]</sup>:

Any of the following, if not used to fulfill the core course requirement:  
ENGL 16, ENGL 43A, ENGL 43AH, ENGL 43B, ENGL 43BH, ENGL 45A, ENGL 45AH, ENGL 45B, ENGL 45BH, ENGL 47A, ENGL 47AH, ENGL 47B, ENGL 47BH

ENGL 5 LGBT Literature (4 units)

ENGL 7 Native American Literature (4 units)

ENGL 8 Children's Literature (4 units)

ENGL 11 Introduction to Poetry (4 units)

or ENGL 11H Honors Introduction to Poetry (4 units)

ENGL 12 African American Literature (4 units)

ENGL 14 Traveling the World through Contemporary Literature (4 units)

ENGL 17 Introduction to Shakespeare (4 units)

ENGL 18A Vampire Literature: Multicultural Representations of the Bloodsucker (4 units)

ENGL 22 Women Writers (4 units)

ENGL 24 Unmasking Comics: The Dawn of the Graphic Novel (4 units)

ENGL 31 Latino/a Literature (4 units)

ENGL 34C Literature into Film (4 units)

ENGL 37 Science Fiction Literature: Reimagining Reality (4 units)

ENGL 40 Asian American Literature (4 units)

ENGL 41 Literature of Multicultural America (4 units)

ENGL 49 California Literature: Golden State, Geographies & Histories (4 units)

ENGL 70R Independent Study in English (1 unit)

ENGL 71R Independent Study in English (2 units)

ENGL 72R Independent Study in English (3 units)

ENGL 73R Independent Study in English (4 units)

<sup>[14]</sup> The student has the option of taking all support courses from the Literature courses.

<sup>[15]</sup> If the student chooses to apply ENGL 70R, 71R or 72R to the support course requirement, additional coursework may be required to meet the minimum units for the support courses.

## ASSOCIATE DEGREE FOR TRANSFER-ENGLISH

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to compose a thesis-based essay that clearly communicates a logical, evidence-supported argument.
- Students will demonstrate, in writing, comprehension and critical analysis of college-level texts.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (5-9 units)

Select ONE of the following options:

#### Option 1:

ENGL 1C Argumentative Writing & Critical Thinking (5 units)

or ENGL 1CH Honors Argumentative Writing & Critical Thinking (5 units)

ENGL 16 Introduction to Literature (4 units)

#### Option 2:

ENGL 1B Composition, Critical Reading & Thinking through Literature (5 units)

or ENGL 1BH Honors Composition, Critical Reading & Thinking through Literature (5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

### Support Courses: (22-25 units)

Complete TWO courses from List A:

List A:

ENGL 43A Survey of British Literature I: Beowulf to the Late 18th Century (5 units)

or ENGL 43AH Honors Survey of British Literature I: Beowulf to the Late 18th Century (5 units)

ENGL 43B Survey of British Literature II: The Romantic Period to the Present (5 units)

or ENGL 43BH Honors Survey of British Literature II: The Romantic Period to the Present (5 units)

ENGL 45A Survey of American Literature I: Beginnings to 1865 (5 units)

or ENGL 45AH Honors Survey of American Literature I: Beginnings to 1865 (5 units)

ENGL 45B Survey of American Literature II: 1865 to the Present (5 units)

or ENGL 45BH Honors Survey of American Literature II: 1865 to the Present (5 units)

ENGL 47A World Literature I (5 units)

or ENGL 47AH Honors World Literature I (5 units)

ENGL 47B World Literature II (5 units)

or ENGL 47BH Honors World Literature II (5 units)

And complete TWO courses from List B (or any course from List A not used above):

List B:

CRWR 6 Introduction to Creative Writing (5 units)

ENGL 11 Introduction to Poetry (4 units)

or ENGL 11H Honors Introduction to Poetry (4 units)

ENGL 14 Traveling the World through Contemporary Literature (4 units)

ENGL 16<sup>[16]</sup> Introduction to Literature (4 units)

ENGL 17 Introduction to Shakespeare (4 units)

And complete ONE course from List C (or any course from List A or B not used above):

List C:

CRWR 25A Poetry in Community (5 units)

CRWR 39A Introduction to Short Fiction Writing (5 units)

CRWR 41A Poetry Writing (5 units)

ENGL 1B<sup>[16]</sup> Composition, Critical Reading & Thinking through Literature (5 units)

or ENGL 1BH<sup>[16]</sup> Honors Composition, Critical Reading & Thinking through Literature (5 units)

ENGL 1C<sup>[16]</sup> Argumentative Writing & Critical Thinking (5 units)

or ENGL 1CH<sup>[16]</sup> Honors Argumentative Writing & Critical Thinking (5 units)

ENGL 5 LGBT Literature (4 units)

ENGL 7 Native American Literature (4 units)

ENGL 8 Children's Literature (4 units)

ENGL 12 African American Literature (4 units)

ENGL 18A Vampire Literature: Multicultural Representations of the Bloodsucker (4 units)

ENGL 22 Women Writers (4 units)

ENGL 24 Unmasking Comics: The Dawn of the Graphic Novel (4 units)

ENGL 31 Latino/a Literature (4 units)

ENGL 34C Literature into Film (4 units)

ENGL 37 Science Fiction Literature: Reimagining Reality (4 units)

ENGL 40 Asian American Literature (4 units)

JAPN 3 Elementary Japanese III (5 units)

SPAN 3 Elementary Spanish III (5 units)

<sup>[16]</sup> If not used to satisfy the core requirement.

## ENTERPRISE NETWORKING

### Program Type(s): Associate in Science Degree, Certificate of Proficiency [Non-Transcriptable]

Units required for major: 49.5, certificate: 18-22.5

#### PROGRAM LEARNING OUTCOMES

- The student will be able to design a network infrastructure to support specific user and business requirements.
- The student will be able to design, implement and maintain appropriate security services for network systems.
- The student will be able to select the components to create a virtual infrastructure.
- The student will be able to optimize the performance, reliability and availability of network services.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (40.5 units)

- C S 50A Network Basics (CCNA) (4.5 units)
- C S 50B Routing & Switching Essentials (CCNA) (4.5 units)
- C S 50C Scaling Local Area Networks (CCNA) (4.5 units)
- C S 50D Connecting Networks-WANs (CCNA) (4.5 units)
- C S 52A Advanced IP Routing Protocols & Services (CCNP) (4.5 units)
- C S 52B Advanced Switching & Campus LAN Design (CCNP) (4.5 units)
- C S 52C Advanced Network Troubleshooting (CCNP) (4.5 units)
- C S 54A Storage Area Networks (4.5 units)
- C S 60A Installing & Configuring Windows Server 2012 (4.5 units)

##### Support Courses: (9 units)

Select ONE option from the following:

##### VMware Option:

- C S 54B VMware vSphere Install, Configure & Manage (4.5 units)
- C S 54C VMware VIEW (4.5 units)

##### Data Center Visualization & Cloud Computing Option:

- C S 54B VMware vSphere Install, Configure & Manage (4.5 units)
- C S 54D Cloud Infrastructure & Services (4.5 units)

##### Microsoft MSCA Server Option:

- C S 60B Administering Windows Server 2012 (4.5 units)
- C S 60C Configuring Advanced Windows Server 2012 Services (4.5 units)

##### Infrastructure/Desktop Support Option:

Select TWO courses from the following:

- C S 50E Introduction to IP Network Security (4.5 units)
- C S 56A Enterprise Wireless Local Area Networks (4.5 units)
- C S 56B IT Essentials (4.5 units)
- C S 61A Windows 8 Configuration (4.5 units)

##### Enterprise Security Option:

Select TWO courses from the following:

- C S 53A Cybersecurity Fundamentals (4.5 units)
- C S 53B Firewalls & Threat Management (4.5 units)
- C S 53C Ethical Hacking (4.5 units)
- C S 53D Introduction to Computer Forensics (4.5 units)

##### Linux Option:

Select TWO courses from the following:

- C S 30C Linux System Administration (4.5 units)
- C S 30D Advanced Linux System Administration (4.5 units)

C S 30E Linux System Administration: Network Services (4.5 units)

##### VMware Certificate of Proficiency (22.5 units)

###### [Non-Transcriptable]

This series of courses prepares the student to receive the VMware Certified Professional-Data Center Virtualization credential. There are no minimum English or math proficiencies required for this certificate.

C S 50C Scaling Local Area Networks (CCNA) (4.5 units)

C S 54A Storage Area Networks (4.5 units)

C S 54B VMware vSphere Install, Configure & Manage (4.5 units)

C S 54C VMware VIEW (4.5 units)

C S 54D Cloud Infrastructure & Services (4.5 units)

##### Cisco Academy CCNA Certificate of Proficiency (22.5 units)

###### [Non-Transcriptable]

This series of courses prepares the student to take the CCNA certification exam. There are no English or mathematics proficiencies required for this certificate.

C S 50A Network Basics (CCNA) (4.5 units)

C S 50B Routing & Switching Essentials (CCNA) (4.5 units)

C S 50C Scaling Local Area Networks (CCNA) (4.5 units)

C S 50D Connecting Networks-WANs (CCNA) (4.5 units)

C S 50E Introduction to IP Network Security (4.5 units)

##### Microsoft Windows MCSA Certificate of Proficiency (18 units)

###### [Non-Transcriptable]

This series of courses prepares the student to take the Microsoft Windows MCSA Certification Exams. There are no English or mathematics proficiencies required for this certificate.

C S 50A Network Basics (CCNA) (4.5 units)

C S 60A Installing & Configuring Windows Server 2012 (4.5 units)

C S 60B Administering Windows Server 2012 (4.5 units)

C S 60C Configuring Advanced Windows Server 2012 Services (4.5 units)

##### Cisco Academy CCNP Certificate of Proficiency (18 units)

###### [Non-Transcriptable]

This series of courses prepares the student to receive the CCNP certification. CCNA-level knowledge is necessary to successfully complete these courses. There are no English or mathematics proficiencies required for this certificate.

C S 52A Advanced IP Routing Protocols & Services (CCNP) (4.5 units)

C S 52B Advanced Switching & Campus LAN Design (CCNP) (4.5 units)

C S 52C Advanced Network Troubleshooting (CCNP) (4.5 units)

C S 56A Enterprise Wireless Local Area Networks (4.5 units)

##### Enterprise Security Certificate of Proficiency (18 units)

###### [Non-Transcriptable]

C S 53A Cybersecurity Fundamentals (4.5 units)

C S 53B Firewalls & Threat Management (4.5 units)

C S 53C Ethical Hacking (4.5 units)

C S 53D Introduction to Computer Forensics (4.5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## ENVIRONMENTAL HORTICULTURE AND DESIGN

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 65, certificate: 18-65

#### PROGRAM LEARNING OUTCOMES

- Students will demonstrate skills necessary to design residential landscapes.
- Students will be able to identify plant material.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (43 units)

HORT 10 Environmental Horticulture & the Urban Landscape (5 units)  
 HORT 15 Orientation to Environmental Horticulture (4 units)  
 HORT 21 Plant Materials I (3 units)  
 HORT 22 Plant Materials II (3 units)  
 HORT 30 Horticultural Practices: Soils (3 units)  
 HORT 40 Landscape Design: Graphic Communication (4 units)  
 HORT 52C Horticultural Practices: Plant Installation & Maintenance (4 units)  
 HORT 54A Landscape Construction: General Practices (5 units)  
 HORT 54B Landscape Construction: Technical Practices (3 units)  
 HORT 54C Landscape Construction: Irrigation Practices (3 units)  
 HORT 60B Landscape Design: Theory (3 units)  
 HORT 60C Landscape Design: Irrigation (3 units)

##### Support Courses: (22 units)

Plant Material Specialization (2 unit minimum)  
 HORT 23 Plant Materials: California Native Plants (2 units)  
 HORT 24 Plant Materials: Ground Covers & Vines (2 units)  
 HORT 25 Plant Materials: Bamboos & Palms (2 units)  
 HORT 26 Plant Materials: Perennials & Annuals (2 units)

And Plant Production Specialization (10 unit minimum)  
 HORT 31 Horticultural Practices: Plant Propagation (3 units)  
 HORT 52E Horticultural Practices: Greenhouse & Nursery Management (3 units)  
 HORT 80A Environmental Horticulture Fall Skills (2 units)  
 HORT 80B Environmental Horticulture Winter Skills (2 units)  
 HORT 80C Environmental Horticulture Spring Skills (2 units)  
 HORT 80D Environmental Horticulture Summer Skills (2 units)

And Career Focus Specialization (8 unit minimum)  
 HORT 43 The Timeless Garden (3 units)  
 HORT 45 Vectorworks for Landscape Designers (3 units)  
 HORT 52G Horticultural Practices: Turfgrass Management (3 units)  
 HORT 52H Horticulture Practices: Integrated Pest Management (3 units)  
 HORT 54D Landscape Construction: Applied Practices (2 units)  
 HORT 54J Horticultural Practices: Insect Identification (2 units)  
 HORT 54K Horticultural Practices: Weed Identification (2 units)  
 HORT 54L Horticultural Practices: Disease Identification (2 units)  
 HORT 55A Green Industry Management: Business Practices (3 units)  
 HORT 60D Landscape Design: Planting (3 units)  
 HORT 60F Landscape Design: Process (3 units)  
 HORT 60G Landscape Design: Intermediate Computer Applications (3 units)  
 HORT 60J Sketchup for Landscape Designers (3 units)  
 SPAN 110 Elementary Spanish Conversation I (3 units)

And Short Course Specialization (2 unit minimum)  
 HORT 90A Container Plantings in the Landscape (1 unit)  
 HORT 90C Garden Ponds & Water Features (1 unit)  
 HORT 90D Herbs: Identification, Use & Folklore (1 unit)  
 HORT 90E Horticultural & Landscape Photography (1 unit)  
 HORT 90F Landscape Design: Basic Principles (1 unit)  
 HORT 90G Landscape Design Forum (1 unit)  
 HORT 90H Landscape Lighting (1 unit)  
 HORT 90I Landscape Sustainability Practices (1 unit)  
 HORT 90K Landscaping with Edibles (1 unit)  
 HORT 90L Plant Propagation: Basic Skills (1 unit)  
 HORT 90M Plant Nutrition & Fertilization (1 unit)  
 HORT 90N Plant Materials: Fall Color (1 unit)  
 HORT 90P Pruning: Basic Skills (1 unit)  
 HORT 90Q Residential Irrigation Systems (1 unit)  
 HORT 90S Sustainable Integrated Pest Management (IPM) (1 unit)  
 HORT 90U Landscape Design: Perspective Sketching (2 units)  
 HORT 90V Sustainable Organic Gardening (1 unit)  
 HORT 90X Water Conservation in Landscape Design (1 unit)  
 HORT 90Y Cacti & Succulents (1 unit)  
 HORT 90Z Ornamental Grasses (1 unit)  
 HORT 91A Composting Theory & Techniques (1 unit)  
 HORT 91C Construction Cost Estimating (1 unit)  
 VITI 90B Vineyard Establishment (2 units)  
 VITI 90C Vineyard Management (2 units)  
 VITI 90D Vine Pruning (1 unit)

#### Certificate of Achievement in Environmental Horticulture and Design (65 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

#### Certificate of Achievement in Landscape Technician (18 units)

HORT 80A Environmental Horticulture Fall Skills (2 units)  
 HORT 80B Environmental Horticulture Winter Skills (2 units)  
 HORT 80C Environmental Horticulture Spring Skills (2 units)  
 HORT 80D Environmental Horticulture Summer Skills (2 units)

And 10 units from the following:

HORT 10 Environmental Horticulture & the Urban Landscape (5 units)  
 HORT 15 Orientation to Environmental Horticulture (4 units)  
 HORT 21 Plant Materials I (3 units)  
 HORT 22 Plant Materials II (3 units)  
 HORT 23 Plant Materials: California Native Plants (2 units)  
 HORT 24 Plant Materials: Ground Covers & Vines (2 units)  
 HORT 25 Plant Materials: Bamboos & Palms (2 units)  
 HORT 26 Plant Materials: Perennials & Annuals (2 units)  
 HORT 30 Horticultural Practices: Soils (3 units)  
 HORT 31 Horticultural Practices: Plant Propagation (3 units)  
 HORT 40 Landscape Design: Graphic Communication (4 units)  
 HORT 43 The Timeless Garden (3 units)  
 HORT 45 Vectorworks for Landscape Designers (3 units)  
 HORT 52C Horticultural Practices: Plant Installation & Maintenance (4 units)  
 HORT 52E Horticultural Practices: Greenhouse & Nursery Management (3 units)  
 HORT 52G Horticultural Practices: Turfgrass Management (3 units)  
 HORT 52H Horticulture Practices: Integrated Pest Management (3 units)  
 HORT 54A Landscape Construction: General Practices (5 units)  
 HORT 54B Landscape Construction: Technical Practices (3 units)  
 HORT 54C Landscape Construction: Irrigation Practices (3 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.



HORT 54D Landscape Construction: Applied Practices (2 units)  
 HORT 54J Horticultural Practices: Insect Identification (2 units)  
 HORT 54K Horticultural Practices: Weed Identification (2 units)  
 HORT 55A Green Industry Management: Business Practices (3 units)  
 HORT 60B Landscape Design: Theory (3 units)  
 HORT 60C Landscape Design: Irrigation (3 units)  
 HORT 60D Landscape Design: Planting (3 units)  
 HORT 60F Landscape Design: Process (3 units)  
 HORT 60G Landscape Design: Intermediate Computer Applications (3 units)  
 HORT 60J Sketchup for Landscape Designers (3 units)  
 HORT 90A Container Plantings in the Landscape (1 unit)  
 HORT 90C Garden Ponds & Water Features (1 unit)  
 HORT 90D Herbs: Identification, Use & Folklore (1 unit)  
 HORT 90E Horticultural & Landscape Photography (1 unit)  
 HORT 90F Landscape Design: Basic Principles (1 unit)  
 HORT 90G Landscape Design Forum (1 unit)  
 HORT 90H Landscape Lighting (1 unit)  
 HORT 90I Landscape Sustainability Practices (1 unit)  
 HORT 90K Landscaping with Edibles (1 unit)  
 HORT 90L Plant Propagation: Basic Skills (1 unit)  
 HORT 90M Plant Nutrition & Fertilization (1 unit)  
 HORT 90N Plant Materials: Fall Color (1 unit)  
 HORT 90P Pruning: Basic Skills (1 unit)  
 HORT 90Q Residential Irrigation Systems (1 unit)  
 HORT 90S Sustainable Integrated Pest Management (IPM) (1 unit)  
 HORT 90U Landscape Design: Perspective Sketching (2 units)  
 HORT 90V Sustainable Organic Gardening (1 unit)  
 HORT 90X Water Conservation in Landscape Design (1 unit)  
 HORT 90Y Cacti & Succulents (1 unit)  
 HORT 90Z Ornamental Grasses (1 unit)  
 HORT 91A Composting Theory & Techniques (1 unit)  
 HORT 91C Construction Cost Estimating (1 unit)  
 SPAN 110 Elementary Spanish Conversation I (3 units)  
 VITI 90B Vineyard Establishment (2 units)  
 VITI 90C Vineyard Management (2 units)  
 VITI 90D Vine Pruning (1 unit)

## GENERAL STUDIES - SCIENCE

### Program Type(s): Associate in Science Degree

Units required for major: 39.5

### PROGRAM LEARNING OUTCOMES

- Students will be able to integrate the various fields of science in order to critically evaluate and interpret scientific information.
- Students will be able to assess how relevant scientific information could be used to inform their own personal economic, political and social decisions.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (39.5 units)

Select 20 units from Category I and 19.5 units from Category II.

#### 1. Category I: Biology

Select at least ONE course each from Area A and Area B. At least one course in this category must include a laboratory.

##### Area A:

BIOL 1C<sup>[17]</sup> Evolution, Systematics & Ecology (6 units)

BIOL 9 Environmental Biology (may be taken with BIOL 9L to satisfy laboratory requirement) (4 units)  
 BIOL 9L Environmental Biology Laboratory (only if taken with BIOL 9) (1 unit)  
 BIOL 10<sup>[17]</sup> General Biology: Basic Principles (5 units)  
 BIOL 14<sup>[17]</sup> Human Biology (5 units)

##### Area B:

BIOL 1A<sup>[17]</sup> Principles of Cell Biology (6 units)  
 BIOL 1B<sup>[17]</sup> Form & Function in Plants & Animals (6 units)  
 BIOL 8 Basic Nutrition (5 units)  
 BIOL 12 Human Genetics (4 units)  
 BIOL 13<sup>[17]</sup> Marine Biology (5 units)  
 BIOL 40A<sup>[17]</sup> Human Anatomy & Physiology I (5 units)  
 BIOL 40B<sup>[17]</sup> Human Anatomy & Physiology II (5 units)  
 BIOL 40C<sup>[17]</sup> Human Anatomy & Physiology III (5 units)  
 BIOL 41<sup>[17]</sup> Microbiology (6 units)  
 BIOL 45 Introduction to Human Nutrition (4 units)

<sup>[17]</sup> Course includes a laboratory component.

#### 2. Category II: Physical Sciences, Computer Science, Mathematics & Engineering

Select at least 5 units from Area A, at least 4.5 units from Area B, at least 5 units from Area C, and at least 5 units from Area D.

##### Area A: Chemistry

CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 CHEM 9 Chemistry of Cooking (5 units)  
 CHEM 12A Organic Chemistry (4 units)  
 and CHEM 12AL Organic Chemistry Laboratory (2 units) or CHEM 13AH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12B Organic Chemistry (4 units)  
 and CHEM 12BL Organic Chemistry Laboratory (2 units) or CHEM 13BH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 12C Organic Chemistry (4 units)  
 and CHEM 12CL Organic Chemistry Laboratory (2 units) or CHEM 13CH Honors Organic Chemistry Laboratory (3 units)  
 CHEM 20 I Matter: Introduction to Chemistry & the Environment (5 units)  
 CHEM 25 Fundamentals of Chemistry (5 units)  
 CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
 CHEM 30B Survey of Organic & Biochemistry (5 units)  
 CHEM 70 Study Skills & Problem-Solving Strategies for CHEM 1A (2 units)

##### Area B: Engineering/Computer Science/Astronomy/PSE

ASTR 10A General Astronomy: Solar System (5 units)  
 ASTR 10B General Astronomy: Star, Galaxies, Cosmology (5 units)  
 or ASTR 10BH Honors General Astronomy: Stars, Galaxies, Cosmology (5 units)  
 ASTR 10L Astronomy Laboratory (1 unit)  
 ASTR 54H Honors Institute Seminar in Astronomy (1 unit)  
 ASTR 77 Seminar on Exciting Topics in Astronomy (1 unit)  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 1B Intermediate Software Design in Java (4.5 units)  
 C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies  
 in C++ (4.5 units)  
 C S 2B Intermediate Software Design in C++ (4.5 units)  
 C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)  
 C S 2M Intermediate Algorithm & Data Structure Methodologies in  
 C++ (4.5 units)  
 C S 3A Object-Oriented Programming Methodologies in Python  
 (4.5 units)  
 C S 3B Intermediate Software Design in Python (4.5 units)  
 C S 3C Advanced Data Structures & Algorithms in Python (4.5 units)  
 C S 10 Computer Architecture & Organization (4.5 units)  
 C S 21A Python for Programmers (4.5 units)  
 C S 21B Intermediate Python Programming (4.5 units)  
 C S 22A JavaScript for Programmers (4.5 units)  
 C S 26A Ruby & Functional Programming (4.5 units)  
 C S 30C Linux System Administration (4.5 units)  
 C S 30D Advanced Linux System Administration (4.5 units)  
 C S 30E Linux System Administration: Network Services (4.5 units)  
 C S 31A Introduction to Database Management Systems (4.5 units)  
 C S 49 Foundations of Computer Programming (2 units)  
 ENGR 6 Engineering Graphics (4 units)  
 ENGR 10 Introduction to Engineering (5 units)  
 ENGR 11 Programming & Problem-Solving in MATLAB (5 units)  
 ENGR 35 Statics (5 units)  
 ENGR 37 Introduction to Circuit Analysis (5 units)  
 ENGR 40 Introduction to Clean Energy Technology (5 units)  
 ENGR 45 Properties of Materials (5 units)  
 ENGR 49 Engineering Profession (1 unit)  
 PSE 20 Introduction to Physical Science (5 units)  
 PSE 51 Frontiers in Science (1 unit)

#### Area C: Mathematics

MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units) and MATH 1AHP Honors  
 Calculus I Seminar (1 unit)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units) and MATH 1BHP Honors  
 Calculus II Seminar (1 unit)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)  
 MATH 2B Linear Algebra (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 MATH 11 Finite Mathematics (5 units)  
 MATH 12 Calculus for Business & Economics (5 units)  
 MATH 17 Integrated Statistics II (5 units)  
 MATH 22 Discrete Mathematics (5 units)  
 or C S 18 Discrete Mathematics (5 units)  
 MATH 42 Math for Elementary School Teachers (5 units)  
 MATH 44 Math for the Liberal Arts (5 units)  
 MATH 48A Precalculus I (5 units)  
 MATH 48B Precalculus II (5 units)  
 MATH 48C Precalculus III (5 units)  
 MATH 67 Enhanced Mathematics Learning with Mathematica (3 units)

#### Area D: Physics

PHYS 2A General Physics (5 units)  
 PHYS 2AM General Physics: Calculus Supplement (1 unit)  
 PHYS 2B General Physics (5 units)  
 PHYS 2BM General Physics: Calculus Supplement (1 unit)  
 PHYS 2C General Physics (5 units)

PHYS 2CM General Physics: Calculus Supplement (1 unit)  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)  
 PHYS 4D General Physics (Calculus) (6 units)  
 PHYS 6 Introductory Physics (5 units)  
 PHYS 12 Introduction to Modern Physics (5 units)  
 PHYS 54H Honors Institute Seminar in Physics (1 unit)

## GENERAL STUDIES - SOCIAL SCIENCE

### Program Type(s): Associate in Arts Degree

Units required for major: 30

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify connections and linkages between specific fields of study, events and ideas and larger studies of specific themes, developments and topics in anthropology, economics, geography, history, political science, psychology, and sociology.
- Students will be able to critically analyze a variety of primary and secondary sources in the fields of anthropology, economics, geography, history, political science, psychology, and sociology and draw scholarly interpretations from them.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (30 units)

Select any combination of 30 units from at least FIVE departments:

#### Anthropology

ANTH 1 Introduction to Physical Anthropology (4 units)  
 or ANTH 1H Honors Introduction to Physical Anthropology (4 units)  
 ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ANTH 2B Patterns of Culture (4 units)  
 ANTH 3 World Prehistory: The Rise & Fall of Early Civilizations (4 units)  
 ANTH 4 First Peoples of North America (4 units)  
 ANTH 5 Magic, Science & Religion (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 8 Introduction to Archaeology (4 units)  
 ANTH 12 Applied Anthropology (4 units)

#### Economics

ECON 1A Principles of Macroeconomics (5 units)  
 ECON 1B Principles of Microeconomics (5 units)  
 ECON 9 Political Economy (4 units)  
 or ECON 9H Honors Political Economy (4 units)  
 or POLI 9 Political Economy (4 units)  
 or POLI 9H Honors Political Economy (4 units)  
 ECON 25 The Global Economy (4 units)

#### Geography

GEOG 1 Physical Geography (5 units)  
 GEOG 2 Human Geography (4 units)  
 GEOG 5 Introduction to Economic Geography (4 units)  
 GEOG 10 World Regional Geography (4 units)

#### History

HIST 3A World History from Prehistory to 750 CE (4 units)  
 HIST 3B World History from 750 CE to 1750 CE (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

HIST 3C World History from 1750 CE to the Present (4 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 10 History of California: The Multicultural State (4 units)  
 HIST 17A History of the United States to 1815 (4 units)  
 HIST 17B History of the United States from 1812 to 1914 (4 units)  
 HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)  
 HIST 18 Introduction to Middle Eastern Civilization (4 units)  
 HIST 20 History of Russia & the Soviet Union (4 units)

#### Humanities

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
 HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
 HUMN 3 World Myths in Literature Arts & Film (4 units)  
 or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
 HUMN 4 Trauma & the Arts (4 units)  
 or HUMN 4H Honors Trauma & the Arts (4 units)  
 HUMN 5 Cultures, Civilizations & Ideas: The Modern World (4 units)  
 HUMN 6 The Shock of the New: From the Modern to the Contemporary (4 units)  
 HUMN 7 Global Religions: Contemporary Practices & Perspectives (4 units)  
 or HUMN 7H Honors Global Religions: Contemporary Practices & Perspectives (4 units)  
 HUMN 9 Once Upon a Time? The Immortal Lure of Fairy Tales (4 units)

#### Political Science

POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
 POLI 2 Comparative Government & Politics (4 units)  
 or POLI 2H Honors Comparative Government & Politics (4 units)  
 POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
 or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)

#### Psychology

PSYC 1 General Psychology (5 units)  
 or PSYC 1H Honors General Psychology (5 units)  
 PSYC 4 Introduction to Biopsychology (5 units)  
 PSYC 10<sup>[18]</sup> Research Methods & Designs (5 units)  
 PSYC 14 Child & Adolescent Development (4 units)  
 PSYC 21<sup>[19]</sup> Psychology of Women: Sex & Gender Differences (4 units)  
 or WMN 21<sup>[19]</sup> Psychology of Women: Sex & Gender Differences (4 units)  
 PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
 PSYC 25 Introduction to Abnormal Psychology (4 units)  
 PSYC 30<sup>[20]</sup> Social Psychology (4 units)  
 PSYC 33 Introduction to Personality Psychology (4 units)  
 PSYC 39 Psychology of Sports (4 units)  
 PSYC 40 Human Development (5 units)  
 PSYC 49 Human Sexuality (4 units)

#### Sociology

SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)

SOC 8 Popular Culture (4 units)  
 SOC 10<sup>[18]</sup> Research Methods & Designs (5 units)  
 SOC 11 Introduction to Social Welfare (5 units)  
 SOC 14 Sociology of Crime (4 units)  
 SOC 15 Law & Society (4 units)  
 SOC 19 Alcohol & Drug Abuse (4 units)  
 SOC 20 Major Social Problems (4 units)  
 SOC 23 Race & Ethnic Relations (4 units)  
 SOC 28 Sociology of Gender (4 units)  
 SOC 30<sup>[20]</sup> Social Psychology (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 WMN 21<sup>[19]</sup> Psychology of Women: Sex & Gender Differences (4 units)

#### Social Science

SOSC 1 Introduction to Global Studies (4 units)  
 SOSC 2 Global Issues (4 units)

<sup>[18]</sup> The student may complete either PSYC 10 or SOC 10, but not both, to satisfy the core course requirements.

<sup>[19]</sup> The student may complete either PSYC 21 or WMN 21, but not both, to satisfy the core course requirements.

<sup>[20]</sup> The student may complete either PSYC 30 or SOC 30, but not both, to satisfy the core course requirements.

## GEOGRAPHIC INFORMATION SYSTEMS TECHNOLOGY

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 41-44.5, certificate: 21-44.5

#### PROGRAM LEARNING OUTCOMES

- Students will be able to apply cartographic principles of scale, resolution, projection, data management and spatial analysis to a geographic nature using a geographic information system.
- Students will be able to plan, evaluate and execute an original geographic information systems project.
- Students will be able to demonstrate the ability to communicate orally, in writing and graphically, the outcome of geographic information systems analysis.
- Students will be able to demonstrate an awareness of professional obligations to society, employers and funders and individuals as outlined in the Geographic Information Systems Professional Certification Institute Code of Ethics.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (30.5 units)

GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
 or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
 GIST 12 Introduction to Geospatial Technology (4 units)  
 or GEOG 12 Introduction to Geospatial Technology (4 units)  
 GIST 52 Geospatial Data Acquisition & Management (4 units)  
 GIST 53 Advanced Geospatial Technology & Spatial Analysis (4 units)  
 GIST 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)  
 GIST 58 Remote Sensing & Digital Image Processing (3 units)  
 GIST 59 Cartography, Map Presentation & Design (2 units)  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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or C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
ITRN 52 Internship (3 units)

#### Support Courses: (10.5-14 units)

Select TWO courses from the following:

C S 21A Python for Programmers (4.5 units)  
C S 22A JavaScript for Programmers (4.5 units)  
C S 31A Introduction to Database Management Systems (4.5 units)  
C S 49 Foundations of Computer Programming (2 units)

And ONE course from the following:

GEOG 1 Physical Geography (5 units)  
GEOG 2 Human Geography (4 units)  
GEOG 10 World Regional Geography (4 units)

#### Certificate of Achievement in Geographic Information Systems Technology I (21-23.5 units)

GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
GIST 12 Introduction to Geospatial Technology (4 units)  
or GEOG 12 Introduction to Geospatial Technology (4 units)  
GIST 52 Geospatial Data Acquisition & Management (4 units)  
GIST 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)  
GIST 58 Remote Sensing & Digital Image Processing (3 units)  
GIST 59 Cartography, Map Presentation & Design (2 units)

And ONE course from the following:

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
C S 21A Python for Programmers (4.5 units)  
C S 22A JavaScript for Programmers (4.5 units)  
C S 31A Introduction to Database Management Systems (4.5 units)  
C S 49 Foundations of Computer Programming (2 units)

#### Certificate of Achievement in Geographic Information Systems Technology II (29.5-32 units)

GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)  
or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
GIST 12 Introduction to Geospatial Technology (4 units)  
or GEOG 12 Introduction to Geospatial Technology (4 units)  
GIST 52 Geospatial Data Acquisition & Management (4 units)  
GIST 53 Advanced Geospatial Technology & Spatial Analysis (4 units)  
GIST 54A Seminar in Specialized Applications of Geographic Information Systems I (2 units)  
GIST 58 Remote Sensing & Digital Image Processing (3 units)  
GIST 59 Cartography, Map Presentation & Design (2 units)

And TWO courses from the following:

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
C S 21A Python for Programmers (4.5 units)  
C S 22A JavaScript for Programmers (4.5 units)  
C S 31A Introduction to Database Management Systems (4.5 units)  
C S 49 Foundations of Computer Programming (2 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

#### Certificate of Achievement in Geographic Information Systems Technology III (41-44.5 units)

The Certificate of Achievement in Geographic Information Systems Technology III is awarded upon completion of the core and support courses listed for the AS degree. General education courses are not required.

### GEOGRAPHY

#### Program Type(s): Associate in Science Degree

Units required for major: 37

#### PROGRAM LEARNING OUTCOMES

- Students will be able to interpret spatially distributed data and draw valid conclusions by using maps, graphs and/or Geographic Information Systems (GIS).
- Students will be able to evaluate core concepts in cultural and physical geography and apply them to contemporary events and issues.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (21 units)

GEOG 1 Physical Geography (5 units)  
GEOG 2 Human Geography (4 units)  
GEOG 5 Introduction to Economic Geography (4 units)  
GEOG 10 World Regional Geography (4 units)  
GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)  
or GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)

##### Support Courses: (16 units)

Select 8 units from the following:  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
or ANTH 2B Patterns of Culture (4 units)  
ECON 25 The Global Economy (4 units)  
GEOG 12 Introduction to Geospatial Technology (4 units)  
or GIST 12 Introduction to Geospatial Technology (4 units)  
HIST 4A History of Western Civilization to 800 CE (4 units)  
or HIST 4B History of Western Civilization: 700-1800 (4 units)  
POLI 15 International Relations/World Politics (4 units)  
or POLI 15H Honors International Relations/World Politics (4 units)  
SOSC 1 Introduction to Global Studies (4 units)  
SOSC 2 Global Issues (4 units)

And 8 units<sup>[21]</sup> from the following:

ANTH 6 Peoples of Africa (4 units)  
BIOL 9 Environmental Biology (4 units)  
BIOL 15 California Ecology/Natural History (5 units)  
HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 18 Introduction to Middle Eastern Civilization (4 units)  
HIST 20 History of Russia & the Soviet Union (4 units)  
POLI 2 Comparative Government & Politics (4 units)  
or POLI 2H Honors Comparative Government & Politics (4 units)

<sup>[21]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.



**ASSOCIATE DEGREE FOR TRANSFER-GEOGRAPHY****Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to interpret spatially distributed data and draw valid conclusions by using maps, graphs and/or Geographic Information Systems (GIS).
- Students will be able to evaluate core concepts in cultural and physical geography and apply them to contemporary events and issues.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (9 units)**

GEOG 1 Physical Geography (5 units)

GEOG 2 Human Geography (4 units)

**Support Courses: (18 units)**

List A: (8 units)

GEOG 10 World Regional Geography (4 units)

GEOG 12 Introduction to Geospatial Technology (4 units)

or GIST 12 Introduction to Geospatial Technology (4 units)

And 10 units from List B:

List B:

ANTH 2A Cultural Anthropology (4 units)

or ANTH 2AH Honors Cultural Anthropology (4 units)

BIOL 10 General Biology: Basic Principles (5 units)

GEOG 5 Introduction to Economic Geography (4 units)

GIST 52 Geospatial Data Acquisition &amp; Management (4 units)

GIST 58 Remote Sensing &amp; Digital Image Processing (3 units)

GIST 59 Cartography, Map Presentation &amp; Design (2 units)

PSYC 7 Statistics for the Behavioral Sciences (5 units)

or SOC 7 Statistics for the Behavioral Sciences (5 units)

**ASSOCIATE DEGREE FOR TRANSFER-GLOBAL STUDIES****Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to identify, analyze, and offer potential solutions to major global challenges from multiple perspectives and worldviews.
- Students will be able to differentiate multiple perspectives on globalization.
- Students will be able to explain how and why the environmental well-being of the world demands personal and collective responsibility.
- Students will be able to explain the interconnectedness of global decisions and events.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (8 units)**

SOSC 1 Introduction to Global Studies (4 units)

SOSC 2 Global Issues (4 units)

**Support Courses: (24-29 units)**

List A:

Complete SIX courses from at least four of the five areas:

Area 1: Culture and Society

ANTH 2A Cultural Anthropology (4 units)

or ANTH 2AH Honors Cultural Anthropology (4 units)

HIST 8 History of Latin America (4 units)

Area 2: Geography

GEOG 1 Physical Geography (5 units)

or GEOG 5 Introduction to Economic Geography (4 units)

GEOG 2 Human Geography (4 units)

GEOG 10 World Regional Geography (4 units)

Area 3: Economics

ECON 1A Principles of Macroeconomics (5 units)

ECON 1B Principles of Microeconomics (5 units)

ECON 9 Political Economy (4 units)

or ECON 9H Honors Political Economy (4 units)

Area 4: Politics

POLI 2 Comparative Government &amp; Politics (4 units)

or POLI 2H Honors Comparative Government &amp; Politics (4 units)

POLI 9 Political Economy (4 units)

or POLI 9H Honors Political Economy (4 units)

POLI 15 International Relations/World Politics (4 units)

or POLI 15H Honors International Relations/World Politics (4 units)

Area 5: Humanities

ART 2E A History of Women in Art (4.5 units)

or HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units) and<sup>[22]</sup> HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)or PHIL 24 Comparative World Religions: East (4 units) and<sup>[22]</sup> PHIL

25 Comparative World Religions: West (4 units)

ENGL 47A World Literature I (5 units)

or ENGL 47AH Honors World Literature I (5 units)

ENGL 47B World Literature II (5 units)

or ENGL 47BH Honors World Literature II (5 units)

JAPN 4 Intermediate Japanese I (5 units)

or SPAN 4 Intermediate Spanish I (5 units)

JAPN 5 Intermediate Japanese II (5 units)

or SPAN 5 Intermediate Spanish II (5 units)

JAPN 6 Intermediate Japanese III (5 units)

or SPAN 6 Intermediate Spanish III (5 units)

<sup>[22]</sup> Both courses must be completed to fulfill the requirement.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## GRAPHIC AND INTERACTIVE DESIGN

**Program Type(s): Associate in Arts Degree, Certificate of Achievement, Career Certificate [Non-Transcriptable], Skills Certificate [Non-Transcriptable]**

Units required for major: 58, certificate: 12-58

### PROGRAM LEARNING OUTCOMES

- Students will understand the design process from sketching to final product.
- Students will be able to create unique graphic designs that communicate ideas to others.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (50 units)

ART 5A 2-D Foundations (4 units)  
 GID 1 History of Graphic Design (4 units)  
 or ART 36 History of Graphic Design (4 units)  
 GID 31 Graphic Design Drawing (4 units)  
 GID 33 Graphic Design Studio I (4 units)  
 GID 34 Graphic Design Studio II (4 units)  
 GID 35 Graphic Design Studio III (4 units)  
 GID 36 Typography (4 units)  
 GID 41 Digital Art & Graphics (4 units)  
 or ART 14D Digital Art & Graphics (4 units)  
 GID 55 User Experience (UI/UX) Design (4 units)  
 GID 56 Website Design (4 units)  
 GID 58 Web Design & Development III (4 units)  
 GID 60 Careers in the Visual Arts (2 units)  
 PHOT 5 Introduction to Photography (4 units)

#### Support Courses: (8 units)

Select 8 units from the following:  
 ART 4A Fundamentals in Drawing (4 units)  
 ART 15A Digital Painting I (4 units)  
 ART 15B Digital Painting II (4 units)  
 ART 20A Color I (4 units)  
 GID 37 Cartoon & Comic Illustration I (4 units)  
 GID 43 Illustration & Digital Imaging (4 units)  
 GID 44A Fundamentals of 3-D Animation (4 units)  
 GID 45 Digital Sound, Video & Animation (4 units)  
 GID 46 Screenprinting (4 units)  
 or ART 39 Screenprinting (4 units)  
 GID 47 Motion Graphics (4 units)  
 or MDIA 32 Motion Graphics (4 units)  
 GID 49 Game Art & Design (4 units)  
 GID 53A Beginning T-Shirt Design & Garment Printing (4 units)  
 GID 53B Intermediate T-Shirt Design & Garment Printing (4 units)  
 GID 53C Advanced T-Shirt Design & Garment Printing (4 units)  
 GID 57 Website Design & Development II (4 units)  
 GID 61 Portfolio (4 units)  
 GID 67 Mobile Game Design (4 units)  
 GID 68A Introduction to Virtual Reality Design (4 units)  
 GID 68B Virtual Reality Game Design (4 units)  
 GID 71 Storyboarding (4 units)  
 GID 77 Advanced Website Design & Development (4 units)  
 GID 78 Rapid Website Development (4 units)

### Certificate of Achievement in Graphic and Interactive Design (58 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

#### Web Design and Development Career Certificate (24 units) [Non-Transcriptable]

GID 55 User Experience (UI/UX) Design (4 units)  
 GID 56 Website Design (4 units)  
 GID 57 Website Design & Development II (4 units)  
 GID 58 Web Design & Development III (4 units)  
 GID 77 Advanced Website Design & Development (4 units)  
 GID 78 Rapid Website Development (4 units)

#### Graphic Design Skills Certificate (12 units) [Non-Transcriptable]

GID 33 Graphic Design Studio I (4 units)  
 GID 34 Graphic Design Studio II (4 units)  
 GID 35 Graphic Design Studio III (4 units)

#### Garment Printing Skills Certificate (12 units) [Non-Transcriptable]

GID 53A Beginning T-Shirt Design & Garment Printing (4 units)  
 GID 53B Intermediate T-Shirt Design & Garment Printing (4 units)  
 GID 53C Advanced T-Shirt Design & Garment Printing (4 units)

#### Illustration Skills Certificate (12 units) [Non-Transcriptable]

ART 15A Digital Painting I (4 units)  
 GID 31 Graphic Design Drawing (4 units)  
 GID 43 Illustration & Digital Imaging (4 units)

#### Game Design Skills Certificate (12 units) [Non-Transcriptable]

GID 49 Game Art & Design (4 units)  
 GID 67 Mobile Game Design (4 units)  
 GID 68B Virtual Reality Game Design (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## HISTORY

### Program Type(s): Associate in Arts Degree

Units required for major: 36

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify connections between specific people, groups, events and ideas and larger historical themes, developments and topics.
- Students will be able to critically analyze a variety of primary and secondary sources and draw valid historical interpretations from them.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (24 units)

Select 24 units from the following:

HIST 3A World History from Prehistory to 750 CE (4 units)  
 HIST 3B World History from 750 CE to 1750 CE (4 units)  
 HIST 3C World History from 1750 CE to the Present (4 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
 HIST 17A History of the United States to 1815 (4 units)  
 HIST 17B History of the United States from 1812 to 1914 (4 units)  
 HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)

#### Support Courses: (12 units)

Select 12 units from the following:

HIST 8 History of Latin America (4 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 10 History of California: The Multicultural State (4 units)  
 HIST 16 Introduction to Ancient Rome (4 units)  
 or HIST 16H Honors Introduction to Ancient Rome (4 units)  
 HIST 18 Introduction to Middle Eastern Civilization (4 units)  
 HIST 19 History of Asia: China/Japan (4 units)  
 HIST 20 History of Russia & the Soviet Union (4 units)  
 HIST 54H Honors Institute Seminar in History (1 unit)  
 LIBR 10 Research Paper Search Strategies (1 unit)  
 or LIBR 10H Honors Research Paper Search Strategies (1 unit)

## ASSOCIATE DEGREE FOR TRANSFER-HISTORY

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify connections between specific people, groups, events and ideas and larger historical themes, developments and topics.
- Students will be able to critically analyze a variety of primary and secondary sources and draw valid historical interpretations from them.

### ASSOCIATE DEGREE REQUIREMENTS \*

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

### Core Courses: (24 units)

HIST 17A History of the United States to 1815 (4 units)  
 HIST 17B History of the United States from 1812 to 1914 (4 units)  
 HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)

And complete ONE of the two sections below:

Section #1:

HIST 3A World History from Prehistory to 750 CE (4 units)  
 HIST 3B World History from 750 CE to 1750 CE (4 units)  
 HIST 3C World History from 1750 CE to the Present (4 units)

Section #2:

HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)

### Support Courses: (8 units)

One course each from List A and List B:

List A:

ANTH 4 First Peoples of North America (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ART 2E A History of Women in Art (4.5 units)  
 ENGL 12 African American Literature (4 units)  
 ENGL 31 Latino/a Literature (4 units)  
 HIST 8 History of Latin America (4 units)  
 HIST 10 History of California: The Multicultural State (4 units)  
 HIST 18 Introduction to Middle Eastern Civilization (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)  
 WMN 11 Women in Global Perspective (4 units)

List B:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ANTH 2B Patterns of Culture (4 units)  
 GEOG 2 Human Geography (4 units)  
 GEOG 10 World Regional Geography (4 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 20 History of Russia & the Soviet Union (4 units)  
 MUS 8 Music of Multicultural America (5 units)  
 or MUS 8H Honors Music of Multicultural America (5 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 PHIL 25 Comparative World Religions: West (4 units)  
 POLI 1 Political Science: Introduction to American Government & Politics (5 units)

## HUMANITIES

### Program Type(s): Associate in Arts Degree, Certificate of Achievement

Units required for major: 28, certificate: 20

#### PROGRAM LEARNING OUTCOMES

- Students will be able to synthesize critical, empathetic, creative, cooperative and independent thinking skills.
- Students will be able to demonstrate the ability, both orally and in writing, to analyze meaning within various modes of cultural production in relation to their political, economic, social, and religious context.
- Students will be able to formulate knowledge of the deep connection between and within the complexities of diverse historical periods and cultural traditions as a framework for a dynamic understanding of the contemporary world.
- Students will be able to develop the practice of thinking through moral and ethical problems and examining one's own assumptions.
- Students will be able to deepen sources of wisdom through a complex understanding of how others have dealt with failures, successes, adversities and triumphs.
- Students will be able to cultivate the capacity for personal, as well as social, change.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (16 units)

Select 16 units from the following:

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
 HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
 HUMN 3 World Myths in Literature Arts & Film (4 units)  
 or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
 HUMN 4 Trauma & the Arts (4 units)  
 or HUMN 4H Honors Trauma & the Arts (4 units)  
 HUMN 5 Cultures, Civilizations & Ideas: The Modern World (4 units)  
 HUMN 6 The Shock of the New: From the Modern to the Contemporary (4 units)  
 HUMN 7 Global Religions: Contemporary Practices & Perspectives (4 units)  
 or HUMN 7H Honors Global Religions: Contemporary Practices & Perspectives (4 units)  
 HUMN 9 Once Upon a Time? The Immortal Lure of Fairy Tales (4 units)  
 HUMN 58 Ex Machina: The Paradox of Being Human in the Digital Age (4 units)

##### Support Courses: (12 units)

Select at least 12 units within one of the following concentrations:

##### Visual Arts

ART 2E A History of Women in Art (4.5 units)  
 ART 2F Introduction to Asian Art (4.5 units)  
 ART 2J American Art (4.5 units)  
 ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)  
 PHOT 8 Photography of Multicultural America (4 units)  
 or PHOT 8H Honors Photography of Multicultural America (4 units)  
 PHOT 10 History of Photography (4 units)  
 or PHOT 10H Honors History of Photography (4 units)  
 PHOT 11 Contemporary Issues in Photography (4 units)  
 or PHOT 11H Honors Contemporary Issues in Photography (4 units)

##### Film/Theatre

MDIA 1 Introduction to Film Studies (4 units)  
 or MDIA 1H Honors Introduction to Film Studies (4 units)  
 MDIA 2A History of Film 1895-1945 (4 units)  
 MDIA 2B History of Film 1945-Current (4 units)  
 MDIA 2C Current Trends in Film, TV & the Internet (4 units)  
 THTR 1 Introduction to Theatre (4 units)  
 THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)  
 THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)  
 THTR 2F History of American Musical Theatre (4 units)  
 THTR 8 Multicultural Theatre Arts in Modern America (4 units)

##### Literature

ENGL 5 LGBT Literature (4 units)  
 ENGL 7 Native American Literature (4 units)  
 ENGL 8 Children's Literature (4 units)  
 ENGL 11 Introduction to Poetry (4 units)  
 or ENGL 11H Honors Introduction to Poetry (4 units)  
 ENGL 12 African American Literature (4 units)  
 ENGL 14 Traveling the World through Contemporary Literature (4 units)  
 ENGL 17 Introduction to Shakespeare (4 units)  
 ENGL 22 Women Writers (4 units)  
 ENGL 31 Latino/a Literature (4 units)  
 ENGL 40 Asian American Literature (4 units)  
 ENGL 43A Survey of British Literature I: Beowulf to the Late 18th Century (5 units)  
 or ENGL 43AH Honors Survey of British Literature I: Beowulf to the Late 18th Century (5 units)  
 ENGL 43B Survey of British Literature II: The Romantic Period to the Present (5 units)  
 or ENGL 43BH Honors Survey of British Literature II: The Romantic Period to the Present (5 units)  
 ENGL 45A Survey of American Literature I: Beginnings to 1865 (5 units)  
 or ENGL 45AH Honors Survey of American Literature I: Beginnings to 1865 (5 units)  
 ENGL 45B Survey of American Literature II: 1865 to the Present (5 units)  
 or ENGL 45BH Honors Survey of American Literature II: 1865 to the Present (5 units)  
 ENGL 47A World Literature I (5 units)  
 or ENGL 47AH Honors World Literature I (5 units)  
 ENGL 47B World Literature II (5 units)  
 or ENGL 47BH Honors World Literature II (5 units)

##### Music

MUS 1 Introduction to Music (4 units)  
 MUS 2A Great Composers & Music Masterpieces of Western Civilization (5 units)  
 MUS 2B Great Composers & Music Masterpieces of Western Civilization (5 units)  
 MUS 2C Great Composers & Music Masterpieces of Western Civilization (5 units)  
 MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)  
 MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)  
 MUS 7D Contemporary Musical Styles: The Beatles in the Culture of Popular Music (4 units)  
 MUS 7E History of the Blues (4 units)  
 MUS 8 Music of Multicultural America (5 units)  
 or MUS 8H Honors Music of Multicultural America (5 units)  
 MUS 9A Music & Media: Edison to Hendrix (4 units)  
 MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)  
 MUS 11A Jazz & Swing (4 units)  
 MUS 11B Funk, Fusion & Hip-Hop (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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Philosophy  
 HUMN 44H Honors Art & Transgression: The Holocaust in the Literary Imagination (2 units)  
 PHIL 2 Introduction to Social & Political Philosophy (4 units)  
 PHIL 4 Introduction to Philosophy (4 units)  
 PHIL 11 Introduction to the Philosophy of Art & Aesthetics (4 units)  
 PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)  
 PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 PHIL 25 Comparative World Religions: West (4 units)

### Certificate of Achievement in Humanities (20 units)

The certificate of achievement is awarded upon completion of 20 units from the list of courses below. General education courses are not required.

HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
 HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
 HUMN 3 World Myths in Literature Arts & Film (4 units)  
 or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
 HUMN 4 Trauma & the Arts (4 units)  
 or HUMN 4H Honors Trauma & the Arts (4 units)  
 HUMN 5 Cultures, Civilizations & Ideas: The Modern World (4 units)  
 HUMN 6 The Shock of the New: From the Modern to the Contemporary (4 units)  
 HUMN 7 Global Religions: Contemporary Practices & Perspectives (4 units)  
 or HUMN 7H Honors Global Religions: Contemporary Practices & Perspectives (4 units)  
 HUMN 9 Once Upon a Time? The Immortal Lure of Fairy Tales (4 units)

## INSTRUCTIONAL DESIGN AND TECHNOLOGY

### Program Type(s): Certificate of Achievement

Units required for certificate: 27

### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate how the foundational principles and processes of Instructional Systems Design (ISD) can be applied in any business or education setting to create instructional content.
- Students will be able to develop and conduct program and learner needs analyses using industry standard survey, interview, and observation methods in order to improve the design of an instructional intervention.
- Students will be able to develop instructional products, resources, and projects that align with the specified learning objectives, activities, and assessment methods.
- Students will be able to use formative and summative assessment processes and instruments to evaluate the outcomes of program and student learning objectives.

### Certificate of Achievement in Instructional Design and Technology (27 units)

Select 21 units from the following:

LINC 75A Introduction to Instructional Design & Technology (3 units)  
 LINC 75B Instructional Technology Strategies (3 units)  
 LINC 75C Designing Online Instruction (3 units)

LINC 82A Introduction to Designing Instructional Technology Projects (3 units)  
 LINC 82B Developing Instructional Materials (3 units)  
 LINC 82C Creating Interactive Media for Instruction (3 units)  
 LINC 91A Introduction to Assessing Instructional Technology (3 units)  
 LINC 91B Evaluating Technology-based Learning Outcomes (3 units)  
 LINC 91C Evaluating Instructional Programs (3 units)  
 LINC 92 Seminar in Instructional Design & Technology (3 units)

And 6 units from the following:

GID 33 Graphic Design Studio I (4 units)  
 GID 45 Digital Sound, Video & Animation (4 units)  
 GID 56 Website Design (4 units)  
 LINC 50F Integrating Technology into a Standards-based Curriculum I (2 units)  
 LINC 58 Global Project-based Learning (2 units)  
 LINC 77A Design Thinking Process (2 units)  
 LINC 77B Design Thinking & Tinkering (2 units)  
 LINC 77C Design Thinking for Teachers (2 units)  
 LINC 77D Design Thinking Challenges (2 units)  
 LINC 78A Computational Thinking for Educators (2 units)  
 LINC 78B Block Based Coding Concepts (2 units)  
 LINC 78C Project Based Technology Projects (2 units)  
 LINC 79 Multimedia Project Production (2 units)  
 LINC 87 Seminar in Teaching with Educational Technology (5 units)  
 LINC 90C Online Collaboration Tools (2 units)  
 PHOT 5 Introduction to Photography (4 units)  
 PSE 56 Seminar in Teaching Pre-collegiate Mathematics (1 unit)

## JAPANESE

### Program Type(s): Associate in Arts Degree

Units required for major: 40

### PROGRAM LEARNING OUTCOMES

- The student will be able to communicate with native speakers of Japanese, using the appropriate language, styles, sensitivity and level of respectfulness in various situations.
- The student will demonstrate knowledge of Japanese society, culture and history, and will be able to analyze and discuss cultural differences and similarities.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (30 units)

JAPN 1 Elementary Japanese I (5 units)  
 JAPN 2 Elementary Japanese II (5 units)  
 JAPN 3 Elementary Japanese III (5 units)  
 JAPN 4 Intermediate Japanese I (5 units)  
 JAPN 5 Intermediate Japanese II (5 units)  
 JAPN 6 Intermediate Japanese III (5 units)

*Note: For students who can demonstrate proficiency equivalent to one year of college Japanese, JAPN 1, 2 and 3 may be waived. However, if you are waived out of JAPN 1-2-3 (15 units), you must take at least 15 units from the support courses below to satisfy the 30-unit core requirement.*

#### Support Courses: (10 units)

Select 10 units from the following:

JAPN 13A Intermediate Conversation I (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

JAPN 13B Intermediate Conversation II (4 units)  
 JAPN 14A Advanced Conversation I (4 units)  
 JAPN 14B Advanced Conversation II (4 units)  
 JAPN 101A Japanese Language Proficiency Test Preparation I (4 units)  
 JAPN 101B Japanese Language Proficiency Test Preparation II (4 units)  
 JAPN 101C Japanese Language Proficiency Test Preparation III (4 units)  
 JAPN 101D Japanese Language Proficiency Test Preparation IV (4 units)  
 JAPN 192 Community Service Learning for Japanese (1 unit)

*Note: If you are waived of JAPN 1-2-3 (15 units), you must take at least 15 units from the support courses to satisfy the 30 unit core requirement.*

## ASSOCIATE DEGREE FOR TRANSFER-KINESIOLOGY

**Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (20 units)

BIOL 40A Human Anatomy & Physiology I (5 units)  
 BIOL 40B Human Anatomy & Physiology II (5 units)  
 BIOL 40C Human Anatomy & Physiology III (5 units)  
 KINS 1 Introduction to Kinesiology (5 units)

#### Support Courses: (13-15 units)

A. Complete ONE course from three of the five areas:

##### 1. Aquatics:

PHED 10A Aquatics: Level I, Beginning Swimming (1 unit)  
 PHED 10B Aquatics: Level II, Intermediate Swimming (1 unit)  
 PHED 10C Aquatics Level III, Masters Swimming/Advanced Swim Training (1 unit)  
 PHED 11A Water Exercise (1 unit)  
 PHED 11B Aquatic Fitness (1 unit)  
 PHED 13 Beginning Water Polo (1 unit)  
 PHED 13A Intermediate Water Polo (1 unit)  
 PHED 13B Advanced Water Polo (1 unit)  
 PHED 13C Water Polo: Game Skills (1 unit)

##### 2. Dance:

DANC 1A Beginning Ballet (1 unit)  
 DANC 1B Intermediate Ballet (1 unit)  
 DANC 1C Advanced Ballet (1 unit)  
 DANC 2A Beginning Modern Dance (1 unit)  
 DANC 2B Intermediate Modern Dance (1 unit)  
 DANC 3A Beginning Jazz Dance (1 unit)  
 DANC 3B Intermediate Jazz Dance (1 unit)  
 DANC 4A Beginning Ballroom & Social Dance (1 unit)  
 DANC 4B Intermediate Ballroom & Social Dance (1 unit)  
 DANC 4C Advanced Ballroom & Social Dance (1 unit)  
 DANC 5 World Dance (1 unit)  
 DANC 6 Beginning Country-Western Line Dancing (1 unit)  
 DANC 13A Introduction to Contemporary Dance (1 unit)  
 DANC 13B Intermediate Contemporary Dance (1 unit)  
 DANC 14 Dance Conditioning (1 unit)  
 DANC 18A Introduction to Hip-Hop Dance (1 unit)  
 DANC 18B Intermediate Hip-Hop Dance (1 unit)

##### 3. Fitness:

PHED 19B Kickboxing for Fitness (1 unit)

PHED 19C Intermediate Kickboxing for Fitness (1 unit)  
 PHED 19D Advanced Kickboxing for Fitness (1 unit)  
 PHED 20A Beginning Mat Pilates (1 unit)  
 PHED 20B Intermediate Mat Pilates (1 unit)  
 PHED 20C Advanced Pilates (1 unit)  
 PHED 21 Foundations of Yoga (1 unit)  
 PHED 21A Beginning Hatha Yoga (1 unit)  
 PHED 21B Intermediate Hatha Yoga (1 unit)  
 PHED 21C Advanced Hatha Yoga (1 unit)  
 PHED 21D Vinyasa Flow Yoga (1 unit)  
 PHED 21E Restorative Yoga (1 unit)  
 PHED 22 Beginning Flexibility & Mobility (1 unit)  
 PHED 22A Intermediate Flexibility & Mobility (1 unit)  
 PHED 22B Pilates & Yoga (1 unit)  
 PHED 22C Core Conditioning (1 unit)  
 PHED 22E Cross Training for Endurance (1 unit)  
 PHED 23A Trail Hiking (1 unit)  
 PHED 23B Day Hiking (1 unit)  
 PHED 27 Walk for Health (1 unit)  
 PHED 27A Run for Fitness (1 unit)  
 PHED 27B Intermediate Run for Fitness (1 unit)  
 PHED 27C Intermediate Walk for Health (1 unit)  
 PHED 41 Indoor Cycling: Spin (1 unit)  
 PHED 41A Indoor Cycling: Hills & Sprints (1 unit)  
 PHED 41B Intermediate Indoor Cycling (1 unit)  
 PHED 41C Intermediate Indoor Cycling: Hills & Sprints (1 unit)  
 PHED 45 Fitness for Life (1 unit)  
 PHED 45A Foundations of Strength & Conditioning (1 unit)  
 PHED 45C Circuit Training (1 unit)  
 PHED 46 Weight Lifting for Health & Fitness (1 unit)  
 PHED 46A Intermediate Weight Training for Health & Fitness (1 unit)  
 PHED 46B Advanced Weight Lifting for Health & Fitness (1 unit)  
 PHED 47B Thighs, Abs & Gluteus (TAG) (1 unit)  
 PHED 47C High-Intensity Interval Training (HIIT) (1 unit)  
 PHED 49A Survivor Training (1 unit)  
 PHED 49B Boot Camp Training (1 unit)

##### 4. Individual Sports:

PHED 15A Beginning Pickleball (1 unit)  
 PHED 15B Intermediate Pickleball (1 unit)  
 PHED 17A Beginning Karate (1 unit)  
 PHED 17B Intermediate Karate (1 unit)  
 PHED 18 Beginning Tai Chi (Taiji) (1 unit)  
 PHED 18B Intermediate Tai Chi (Taiji) (1 unit)  
 PHED 18C Advanced Tai Chi (Taiji) (1 unit)  
 PHED 24 Introduction to Golf (1 unit)  
 PHED 24A Swing Development for the Experienced Golfer (1 unit)  
 PHED 24B Skills of Golf Course Play (1 unit)  
 PHED 24C Intermediate Golf Course Play (2 units)  
 PHED 24D Advanced Golf Course Play (2 units)  
 PHED 25A Swing Analysis (1 unit)  
 PHED 25B Beginning Golf Course Play (2 units)  
 PHED 26 Beginning Tennis Skills (1 unit)  
 PHED 26A Intermediate Tennis (1 unit)  
 PHED 26C Beginning Doubles Tennis (1 unit)  
 PHED 26D Intermediate Doubles Tennis (1 unit)  
 PHED 26E Advanced Doubles Tennis (1 unit)  
 PHED 26F Aerobic Tennis (1 unit)  
 PHED 36A Beginning Archery (1 unit)  
 PHED 36B Intermediate Archery (1 unit)  
 PHED 36C Advanced Archery (1 unit)  
 PHED 37 Beginning Badminton: Singles & Doubles (1 unit)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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PHED 37A Intermediate Badminton: Singles & Doubles (1 unit)  
 PHED 37B Advanced Badminton: Singles & Doubles (1 unit)  
 PHED 42 Bowling for Fitness (1 unit)

#### 5. Team Sports:

PHED 31A Futsal: Indoor Soccer Beginning (1 unit)  
 PHED 31B Futsal: Indoor Soccer Intermediate (1 unit)  
 PHED 31C Futsal: Indoor Soccer Advanced (1 unit)  
 PHED 32C Soccer: Game Skills (1 unit)  
 PHED 33 Beginning Table Tennis (1 unit)  
 PHED 33A Intermediate Table Tennis (1 unit)  
 PHED 38A Basketball Fundamentals (1 unit)  
 PHED 38B Basketball Game Skills (1 unit)  
 PHED 38C Beginning Basketball (1 unit)  
 PHED 38D Intermediate Basketball (1 unit)  
 PHED 38E Advanced Basketball (1 unit)  
 PHED 40 Beginning Volleyball (1 unit)  
 PHED 40A Intermediate Volleyball (1 unit)  
 PHED 43A Ultimate I (1 unit)

#### B. And complete TWO courses from the following:

BIOL 14 Human Biology (5 units)  
 CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
 EMS 50 Emergency Medical Response (5 units)  
 MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 PHYS 2A General Physics (5 units)  
 and PHYS 2B General Physics (5 units)  
 or PHYS 4A General Physics (Calculus) (6 units)

Option 1:  
 PHYS 2A General Physics (5 units)  
 PHYS 2B General Physics (5 units)  
 PHYS 2C General Physics (5 units)

Option 2:  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)

Option 3:  
 CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)

Option 4:  
 C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
 or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)  
 C S 1B Intermediate Software Design in Java (4.5 units)  
 C S 1C Advanced Data Structures & Algorithms in Java (4.5 units)  
 C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
 or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)  
 C S 2B Intermediate Software Design in C++ (4.5 units)  
 C S 2C Advanced Data Structures & Algorithms in C++ (4.5 units)  
 C S 3A Object-Oriented Programming Methodologies in Python (4.5 units)  
 C S 3B Intermediate Software Design in Python (4.5 units)  
 C S 3C Advanced Data Structures & Algorithms in Python (4.5 units)

## MATHEMATICS

### Program Type(s): Associate in Science Degree

Units required for major: 44-49

### PROGRAM LEARNING OUTCOMES

- The student will be able to clearly communicate mathematical ideas through graphs, tables of data, equations and verbal descriptions.
- The student will be able to construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques and interpret results of those models.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (44-49 units)

MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units) and MATH 1AHP Honors Calculus I Seminar (1 unit)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units) and MATH 1BHP Honors Calculus II Seminar (1 unit)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 MATH 2A Differential Equations (5 units)  
 MATH 2B Linear Algebra (5 units)  
 MATH 22 Discrete Mathematics (5 units)  
 or C S 18 Discrete Mathematics (5 units)

And TWO courses from ONE of the four following options:

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## ASSOCIATE DEGREE FOR TRANSFER-MATHEMATICS

### Program Type(s): Associate in Science for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to clearly communicate mathematical ideas through graphs, tables of data, equations and verbal descriptions.
- Students will be able to construct appropriate mathematical models of natural phenomena, develop those models with appropriate mathematical techniques and interpret results of those models.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (20 units)

MATH 1A Calculus (5 units)

or MATH 1AH Honors Calculus I (5 units)

MATH 1B Calculus (5 units)

or MATH 1BH Honors Calculus II (5 units)

MATH 1C Calculus (5 units)

MATH 1D Calculus (5 units)

##### Support Courses: (9.5-11 units)

Select ONE course each from List A and List B:

List A:

MATH 2A Differential Equations (5 units)

MATH 2B Linear Algebra (5 units)

List B:

C S 1A Object-Oriented Programming Methodologies in Java (4.5 units)  
or C S 1AH Honors Object-Oriented Programming Methodologies in Java (4.5 units)

C S 2A Object-Oriented Programming Methodologies in C++ (4.5 units)  
or C S 2AH Honors Object-Oriented Programming Methodologies in C++ (4.5 units)

MATH 2A<sup>[23]</sup> Differential Equations (5 units)

MATH 2B<sup>[23]</sup> Linear Algebra (5 units)

MATH 10 Elementary Statistics (5 units)

MATH 22 Discrete Mathematics (5 units)

or C S 18 Discrete Mathematics (5 units)

PHYS 4A General Physics (Calculus) (6 units)

<sup>[23]</sup> MATH 2A or 2B may be used to satisfy List B requirement if they were not used to meet the requirement for List A.

## MUSIC: GENERAL

### Program Type(s): Associate in Arts Degree, Certificate of Achievement

Units required for major: 43, certificate: 25

#### PROGRAM LEARNING OUTCOMES

- Through the study of music history/literature, students examine music masterpieces from multiple eras and cultures, synthesizing information and making judgments as they evaluate how music reflects individual composers' lives, as well as the contemporary social/historical context in which the compositions were created and performed.
- Through music theory/composition, students analyze the structure of music and learn to create their own original works satisfying specific and complex compositional requirements.

- Through music performance, students learn how to apply and express their historical, theoretical, and artistic understandings in a presentation addressing an appropriate audience.
- Using this three-lens framework, students increase their community/global consciousness as they learn to appreciate how music is a potent tool for understanding individual and cultural uniqueness within the larger context of our common humanity.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (35 units)

Select SEVEN courses from the following:

MUS 2A Great Composers & Music Masterpieces of Western Civilization (5 units)

MUS 2B Great Composers & Music Masterpieces of Western Civilization (5 units)

MUS 2C Great Composers & Music Masterpieces of Western Civilization (5 units)

MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)

MUS 3A Theory & Musicianship I (5 units)

MUS 3B Theory & Musicianship II (5 units)

MUS 3C Theory & Musicianship III (5 units)

MUS 3D Theory & Musicianship IV (5 units)

##### Support Courses: (8 units)

Select 8 units from the following:

MUS 1 Introduction to Music (4 units)

MUS 2F History of American Musical Theater (4 units)

MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)

MUS 7D Contemporary Musical Styles: The Beatles in the Culture of Popular Music (4 units)

MUS 7E History of the Blues (4 units)

MUS 8 Music of Multicultural America (5 units)

or MUS 8H Honors Music of Multicultural America (5 units)

MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)

MUS 10 Music Fundamentals (4 units)

MUS 11B Funk, Fusion & Hip-Hop (4 units)

MUS 12A Beginning Class Piano (2 units)

MUS 12B Intermediate Class Piano (2 units)

MUS 12C Advanced Class Piano (2 units)

MUS 13A Class Voice I (2 units)

MUS 13B Class Voice II (2 units)

MUS 13C Class Voice III (2 units)

MUS 14A Beginning Classical Guitar (2 units)

MUS 14B Intermediate Classical Guitar (2 units)

MUS 14C Advanced Classical Guitar (2 units)

MUS 15A Beginning Acoustic Guitar Techniques (2 units)

MUS 15B Intermediate Acoustic Guitar Techniques (2 units)

MUS 15C Advanced Acoustic Guitar Techniques (2 units)

MUS 38A Guitar Ensemble I (2 units)

MUS 38B Guitar Ensemble II (2 units)

MUS 38C Guitar Ensemble III (2 units)

MUS 47A Introduction to Musical Theatre Production (6 units)

or THTR 47A Introduction to Musical Theatre Production (6 units)

MUS 47B Intermediate Music Theatre Production Workshop (6 units)

or THTR 47B Intermediate Music Theatre Production Workshop (6 units)

MUS 47C Advanced Music Theatre Production Workshop (6 units)

or THTR 47C Advanced Music Theatre Production Workshop (6 units)

MUS 47D Advanced Music Theatre Production Workshop II (6 units)

or THTR 47D Advanced Music Theatre Production Workshop II (6 units)

MUS 48B Singing Technique for Musical Theatre (4 units)

or THTR 48B Singing Technique for Musical Theatre (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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MUS 48C Musical Theatre Repertoire for Singers (4 units)  
or THTR 48C Musical Theatre Repertoire for Singers (4 units)

### Certificate of Achievement in Music History and Literature (25 units)

MUS 2A Great Composers & Music Masterpieces of Western Civilization (5 units)  
MUS 2B Great Composers & Music Masterpieces of Western Civilization (5 units)  
MUS 2C Great Composers & Music Masterpieces of Western Civilization (5 units)  
MUS 2D World Music: Roots to Contemporary Global Fusion (5 units)  
MUS 8 Music of Multicultural America (5 units)  
or MUS 8H Honors Music of Multicultural America (5 units)

## MUSIC TECHNOLOGY

### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Certificate of Proficiency [Non-Transcriptable]

May be transferrable to a four-year university.  
Units required for major: 52, certificate: 16-52

### PROGRAM LEARNING OUTCOMES

- Students who complete the traditional transfer course sequence will be able to demonstrate knowledge, skills and understanding in the three emphases identified by the National Association of Schools of Music (NASM): music history/literature, composition/theory, and performance.
- Students who complete the vocational program will also be able to demonstrate knowledge, skills and understanding in the areas of music business, technology and contemporary popular music literature and composition/engineering identified by the program's board of advisors.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (40 units)

MTEC 50A Introduction to Music Technology (4 units)  
MTEC 51A Studio Recording I (4 units)  
or MTEC 60A Producing in the Home Studio I (4 units)  
MTEC 52A Mixing & Mastering I (4 units)  
MTEC 53A Audio Plug-Ins & Signal Processing (4 units)  
MTEC 55A Introduction to Game Audio (4 units)  
MTEC 57A Sound Design for Film & Video (4 units)  
or MDIA 81B Sound Design for Film & Video (4 units)  
MTEC 62A Composing & Producing Electronic Music I (4 units)  
MTEC 70A Pro Tools 101-Avid Certification (4 units)

And TWO courses from the following:

MUS 9A Music & Media: Edison to Hendrix (4 units)  
MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)  
MUS 11A Jazz & Swing (4 units)  
MUS 11B Funk, Fusion & Hip-Hop (4 units)  
MUS 11D History of Electronic Music: Origins-1970 (4 units)  
MUS 11E History of Electronic Music: 1970-Present (4 units)

#### Support Courses: (12 units)

Select 12 units from the following:

MTEC 49 History of Music Technology (4 units)  
MTEC 51B Studio Recording II (4 units)  
MTEC 51C Studio Recording III (4 units)  
MTEC 52B Mixing & Mastering II (4 units)  
MTEC 53B Audio Plug-Ins & Virtual Instruments (4 units)  
MTEC 54A Music Theory for Audio Producers (4 units)

MTEC 55B Advanced Sound Design for Games (4 units)  
MTEC 55C Music Composition for Games (4 units)  
MTEC 57B Surround Sound Production (4 units)  
MTEC 60A<sup>[24]</sup> Producing in the Home Studio I (4 units)  
MTEC 60B Producing in the Home Studio II (4 units)  
MTEC 62B Composing & Producing Electronic Music II (4 units)  
MTEC 62C Composing & Producing Electronic Music III (4 units)  
MTEC 66A Music Video Production (4 units)  
MTEC 70B Pro Tools 110-Avid Certification (4 units)  
MTEC 70C Pro Tools 201-Avid Certification (4 units)  
MTEC 70D Pro Tools 210M-Avid Certification (4 units)  
MTEC 70E Pro Tools 210P-Avid Certification (4 units)  
MTEC 70F Pro Tools 310M-Avid Certification (4 units)  
MTEC 70G Pro Tools 310P-Avid Certification (4 units)  
MTEC 72A Producing Music with Reason (4 units)  
MTEC 72B Producing Music with Ableton Live (4 units)  
MTEC 72C Producing Music with Logic Pro X (4 units)  
MTEC 80A Music Business (4 units)  
MTEC 80B Entertainment Law & New Media (4 units)  
MTEC 80C Basics of Music Publishing (4 units)  
MTEC 82A Careers in Music Technology (4 units)  
MTEC 82B Marketing Your Music (4 units)  
MTEC 82C Introduction to the Video Game Business (3.5 units)  
MTEC 84A Music & Medicine (4 units)  
or MUS 83A Music & Medicine (4 units)  
MTEC 88A Songwriter's Workshop (4 units)  
MTEC 88B Modern Song Composition (4 units)  
MTEC 88C Advanced Song Structure (4 units)  
MUS 7F Music in Film (4 units)  
MUS 11D<sup>[24]</sup> History of Electronic Music: Origins-1970 (4 units)  
MUS 11E<sup>[24]</sup> History of Electronic Music: 1970-Present (4 units)  
MUS 11F Video Games & Popular Culture (4 units)  
or MDIA 13 Video Games & Popular Culture (4 units)  
MUS 41 Live Music Performance Workshop (2 units)  
MUS 70R Independent Study in Music/Music Technology (1 unit)  
MUS 71R Independent Study in Music/Music Technology (2 units)  
MUS 72R Independent Study in Music/Music Technology (3 units)  
MUS 73R Independent Study in Music/Music Technology (4 units)  
MDIA 1 Introduction to Film Studies (4 units)  
or MDIA 1H Honors Introduction to Film Studies (4 units)  
MDIA 2A History of Film 1895-1945 (4 units)  
MDIA 2B History of Film 1945-Current (4 units)  
MDIA 2C Current Trends in Film, TV & the Internet (4 units)  
MDIA 3 Introduction to Film & Media Criticism (4 units)  
MDIA 5 American Cinema (4 units)  
MDIA 6 Film & New Media Genres (4 units)  
MDIA 8A Race & Gender in American Media (4 units)  
MDIA 9 Global Media (4 units)  
MDIA 11 Introduction to Popular Culture (4 units)  
or MDIA 11H Honors Introduction to Popular Culture (4 units)  
MDIA 12 Popular Culture & United States History (4 units)  
MDIA 20 Fundamentals of Media Production (4 units)  
MDIA 30 Digital Video Editing I (4 units)  
MDIA 31 Digital Video Editing II (4 units)  
MDIA 40 Digital Sound, Video & Animation (4 units)  
MDIA 51 Web Video (4 units)  
MDIA 52 Scriptwriting for Film & Video (4 units)

<sup>[24]</sup> May be completed only once for credit to satisfy either the core or support course requirements.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

**Certificate of Achievement in Music Technology (52 units)**

The certificate of achievement is awarded after completion of the core and support courses. General education courses are not required.

**Certificate of Achievement in Game Audio (36 units)**

MTEC 51A Studio Recording I (4 units)  
or MTEC 60A Producing in the Home Studio I (4 units)  
MTEC 55A Introduction to Game Audio (4 units)  
MTEC 55B Advanced Sound Design for Games (4 units)  
MTEC 55C Music Composition for Games (4 units)  
MTEC 70A Pro Tools 101-Avid Certification (4 units)  
MTEC 70B Pro Tools 110-Avid Certification (4 units)  
MTEC 70C Pro Tools 201-Avid Certification (4 units)  
MTEC 70D Pro Tools 210M-Avid Certification (4 units)  
or MTEC 70E Pro Tools 210P-Avid Certification (4 units)  
MUS 11F Video Games & Popular Culture (4 units)  
or MDIA 13 Video Games & Popular Culture (4 units)

**Certificate of Achievement in Pro Tools (32 units)**

MTEC 50A Introduction to Music Technology (4 units)  
MTEC 51A Studio Recording I (4 units)  
or MTEC 60A Producing in the Home Studio I (4 units)  
MTEC 52A Mixing & Mastering I (4 units)  
MTEC 53A Audio Plug-Ins & Signal Processing (4 units)  
MTEC 70A Pro Tools 101-Avid Certification (4 units)  
MTEC 70B Pro Tools 110-Avid Certification (4 units)  
MTEC 70C Pro Tools 201-Avid Certification (4 units)  
MTEC 70D Pro Tools 210M-Avid Certification (4 units)  
or MTEC 70E Pro Tools 210P-Avid Certification (4 units)

**Songwriting Certificate of Proficiency (20 units)****[Non-Transcriptable]**

MTEC 80A Music Business (4 units)  
or MTEC 80C Basics of Music Publishing (4 units)  
MTEC 88A Songwriter's Workshop (4 units)  
MTEC 88B Modern Song Composition (4 units)  
MTEC 88C Advanced Song Structure (4 units)  
MUS 10 Music Fundamentals (4 units)

**Game Audio Certificate of Proficiency (20 units)****[Non-Transcriptable]**

MTEC 55A Introduction to Game Audio (4 units)  
MTEC 55B Advanced Sound Design for Games (4 units)  
MTEC 55C Music Composition for Games (4 units)  
MTEC 70A Pro Tools 101-Avid Certification (4 units)  
MUS 11F Video Games & Popular Culture (4 units)  
or MDIA 13 Video Games & Popular Culture (4 units)

**Music Business Certificate of Proficiency (16 units)****[Non-Transcriptable]**

MTEC 80A Music Business (4 units)

And THREE courses from the following:

MTEC 80B Entertainment Law & New Media (4 units)  
MTEC 80C Basics of Music Publishing (4 units)  
MTEC 82A Careers in Music Technology (4 units)  
MTEC 82B Marketing Your Music (4 units)

**Electronic Music Certificate of Proficiency (16 units)****[Non-Transcriptable]**

MTEC 52A Mixing & Mastering I (4 units)

MTEC 62A Composing & Producing Electronic Music I (4 units)  
MTEC 62B Composing & Producing Electronic Music II (4 units)  
MTEC 70A Pro Tools 101-Avid Certification (4 units)  
or MTEC 72B Producing Music with Ableton Live (4 units)  
or MTEC 72C Producing Music with Logic Pro X (4 units)

**Audio Post Production Certificate of Proficiency (16 units)****[Non-Transcriptable]**

MTEC 57A Sound Design for Film & Video (4 units)  
or MDIA 81B Sound Design for Film & Video (4 units)  
MTEC 57B Surround Sound Production (4 units)  
MTEC 70A Pro Tools 101-Avid Certification (4 units)  
MTEC 70B Pro Tools 110-Avid Certification (4 units)

**NANOSCIENCE****Program Type(s): Associate in Science Degree, Certificate of Achievement, Certificate of Proficiency [Non-Transcriptable]**

Units required for major: 45-50, certificate: 10-30

**PROGRAM LEARNING OUTCOMES**

- Students will apply foundational nanoscience principles to understanding and further learning about nanostructures, material properties, and engineering solutions, applying scientific literature, seminars, and webinars.
- Students will develop plausible approaches materials engineering solutions for industrial applications. These include applying characterization skills to elucidating structure, property relationships, process optimization and consistent material manufacturing.
- Students with internships and/or concurrent work experience will support fundamental research and development, process development, characterization (including quality assurance/quality control, failure analysis, etc.) and consistent/quality manufacturing practice in all sizes of high-technology firms.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (10 units)**

NANO 10 Introduction to Nanotechnology (5 units)  
NANO 51 Applications of Nanotechnology (5 units)

**Support Courses: (35-40 units)**

Select ONE option from the following:

Nanoscience Transfer Option (40 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
MATH 1A Calculus (5 units)  
or MATH 1AH Honors Calculus I (5 units)  
MATH 1B Calculus (5 units)  
or MATH 1BH Honors Calculus II (5 units)  
MATH 1C Calculus (5 units)  
And 15 units from the following:  
BIOL 1A Principles of Cell Biology (6 units)  
BIOL 1D Introduction to Molecular Genetics (4 units)  
ENGR 45 Properties of Materials (5 units)  
NANO 52 Nanomaterials & Nanostructures (5 units)  
NANO 53 Nanomaterials Characterization (5 units)  
NANO 54 Nanofabrication Tools & Process (5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

Nanoscience Workforce Option (35 units)  
 NANO 52 Nanomaterials & Nanostructures (5 units)  
 NANO 53 Nanomaterials Characterization (5 units)  
 NANO 54 Nanofabrication Tools & Process (5 units)  
 NANO 62 Nanomaterials Engineering: Structures, Processing & Characterization (5 units)  
 PHYS 2A<sup>[25]</sup> General Physics (5 units)  
 PHYS 2B General Physics (5 units)  
 PHYS 2C General Physics (5 units)

<sup>[25]</sup> PHYS 2A is recommended if the student is preparing to transfer to a four-year institution.

#### **Certificate of Achievement in Nanoscience (30 units)**

The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, or 1S & 1T, and MATH 17, 105 or 108 completed with a letter grade of "C" or better.

CHEM 1A<sup>[26]</sup> General Chemistry (5 units)  
 or CHEM 1AH<sup>[26]</sup> Honors General Chemistry (5 units)  
 or equivalent course  
 NANO 10 Introduction to Nanotechnology (5 units)  
 NANO 51 Applications of Nanotechnology (5 units)  
 NANO 52 Nanomaterials & Nanostructures (5 units)  
 NANO 53 Nanomaterials Characterization (5 units)  
 NANO 54 Nanofabrication Tools & Process (5 units)

<sup>[26]</sup> CHEM 1A or 1AH is a prerequisite for the remaining courses in this certificate.

#### **Nanocharacterization Certificate of Proficiency (15 units)**

##### **[Non-Transcriptable]**

The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, or 1S & 1T, and MATH 17, 105 or 108 completed with a letter grade of "C" or better.

NANO 51 Applications of Nanotechnology (5 units)  
 or NANO 10 Introduction to Nanotechnology (5 units)  
 NANO 52 Nanomaterials & Nanostructures (5 units)  
 NANO 53 Nanomaterials Characterization (5 units)

#### **Nanofabrication Certificate of Proficiency (15 units)**

##### **[Non-Transcriptable]**

The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, or 1S & 1T, and MATH 17, 105 or 108 completed with a letter grade of "C" or better.

NANO 51 Applications of Nanotechnology (5 units)  
 or NANO 10 Introduction to Nanotechnology (5 units)  
 NANO 52 Nanomaterials & Nanostructures (5 units)  
 NANO 54 Nanofabrication Tools & Process (5 units)

#### **Nanostructures Certificate of Proficiency (10 units)**

##### **[Non-Transcriptable]**

NANO 51 Applications of Nanotechnology (5 units)  
 or NANO 10 Introduction to Nanotechnology (5 units)  
 NANO 62 Nanomaterials Engineering: Structures, Processing & Characterization (5 units)

## **NON-CREDIT: BRIDGE TO COLLEGE ESL PATHWAY**

### **Program Type(s): Certificate of Competency**

#### **PROGRAM LEARNING OUTCOMES**

- The student will be able to identify campus resources to promote their academic success.
- The student will feel confident to seek assistance in class and around campus as needed to self-advocate.
- The student will gain the study skills necessary to be successful in ESL courses and courses in other disciplines.

#### **Bridge to College ESL Pathway Certificate of Competency (96 hours)**

##### **[Non-Transcriptable]**

NCEL 400 Bridge to College (60 hours)

NCEL 403B Transitioning to College ESL Part II (36 hours)

## **NON-CREDIT: BRIDGE TO COLLEGE LEVEL MATHEMATICS**

### **Program Type(s): Certificate of Completion**

#### **PROGRAM LEARNING OUTCOMES**

- Students will demonstrate improved numerical literacy and quantitative reasoning skills necessary for future progression in math courses.

#### **Bridge to College Level Mathematics Certificate of Completion (50 hours)**

##### **[Non-Transcriptable]**

NCBS 403A Bridge to College Level Mathematics I (25 hours)

NCBS 403B Bridge to College Level Mathematics II (25 hours)

## **NON-CREDIT: EMERGENCY MEDICAL TECHNOLOGY**

### **Program Type(s): Certificate of Completion**

#### **PROGRAM LEARNING OUTCOMES**

- The student will be able to perform as a competent, entry level EMT in accordance with Title 22, providing life saving care during emergent and non-emergent incidents that involve victims of illness or injury.
- The student will be eligible to take the National Registry EMT-B written exam for certification.

#### **Emergency Medical Technology Certificate of Completion (324 hours)**

##### **[Non-Transcriptable]**

EMS 400 Emergency Medical Response Noncredit (96 hours)

EMS 401 Emergency Medical Technician: Basic Part A Noncredit (84 hours)

EMS 401A Emergency Medical Technician Simulation Laboratory I Noncredit (18 hours)

EMS 402 Emergency Medical Technician: Basic Part B Noncredit (108 hours)

EMS 402A Emergency Medical Technician Simulation Laboratory II Noncredit (18 hours)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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## NON-CREDIT: ENGLISH AS A SECOND LANGUAGE - BEGINNING

**Program Type(s): Certificate of Competency**

### PROGRAM LEARNING OUTCOMES

- The student will be prepared to do level 2 noncredit course work.
- The student will be able to write affirmative and negative statements in simple present, present progressive, simple past, and future as well as formulate questions and answers to express advice, requests, desires, offers, and necessity.

**English as a Second Language - Beginning Certificate of Competency (360 hours)**

**[Non-Transcriptable]**

NCEL 411 Advanced-Beginning English as a Second Language I (120 hours)

NCEL 412 Advanced-Beginning English as a Second Language II (120 hours)

NCEL 413 Advanced-Beginning English as a Second Language III (120 hours)

## NON-CREDIT: ENGLISH AS A SECOND LANGUAGE - INTERMEDIATE

**Program Type(s): Certificate of Competency**

### PROGRAM LEARNING OUTCOMES

- The student will be able to place into a level 4 credit course.
- The student will be able to identify topics, main ideas, and supporting details in readings of approximately 500 words.

**English as a Second Language - Intermediate Certificate of Competency (360 hours)**

**[Non-Transcriptable]**

NCEL 421 Intermediate English as a Second Language I (120 hours)

NCEL 422 Intermediate English as a Second Language II (120 hours)

NCEL 423 Intermediate English as a Second Language III (120 hours)

## NON-CREDIT: ENGLISH AS A SECOND LANGUAGE FOR FOOD SERVICE WORKERS

**Program Type(s): Certificate of Completion**

### PROGRAM LEARNING OUTCOMES

- The student will be proficient in basic kitchen vocabulary, common safety and sanitation and food storage language.
- The student will be able to understand and complete typical work forms.
- The student will be proficient in following recipes and reading/ converting units of measurement.
- The student will be proficient in the use of language for job interactions and advocacy (asking for time off, a raise/advancement).
- The student will be able to navigate interviews and discuss work history, skills, training, and education, as well as demonstrate knowledge of American work culture.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

**English as a Second Language for Food Service Workers Certificate of Completion (144 hours)**

**[Non-Transcriptable]**

NCEL 470 Low to Intermediate Vocational ESL for Food Workers (48 hours)

NCEL 471 Intermediate to Advanced ESL for Food Workers (48 hours)

NCEL 480 ESL for Job Searching (48 hours)

## NON-CREDIT: GERIATRIC HOME AIDE

**Program Type(s): Certificate of Completion**

### PROGRAM LEARNING OUTCOMES

- The student will be prepared to administer safe care to ambulatory elderly patients in their own homes under the supervision of a registered nurse.
- The student will be prepared to document their care to ambulatory elderly patients in their own homes under the supervision of a registered nurse.

**Geriatric Home Aide Certificate of Completion (104 hours)**

**[Non-Transcriptable]**

NCSV 400 Geriatric Home Aide Basics (60 hours)

NCSV 401 Geriatric Home Aide-Nutrition (44 hours)

## NON-CREDIT: MATHEMATICAL FOUNDATIONS

**Program Type(s): Certificate of Completion**

### PROGRAM LEARNING OUTCOMES

- Students will demonstrate numerical literacy and quantitative reasoning skills at an appropriate level for future progression in basic skills credit math courses.

**Mathematical Foundations Certificate of Completion (60 hours)**

**[Non-Transcriptable]**

NCBS 401A Mathematical Foundations for College Part I (20 hours)

NCBS 401B Mathematical Foundations for College Part II (40 hours)

NCBS 405 Supplemental Instruction: Physical Science, Math & Engineering (60-360 hours)



## PARAMEDIC

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 76.5, certificate: 76.5

#### PROGRAM LEARNING OUTCOMES

- Graduates will become knowledgeable in multiple areas of anatomy and pathophysiology of various illness and injury, which will help the paramedic to provide competent patient care.
- Graduates will have outstanding clinical assessment and skills.
- Graduates will meet or exceed the requirements for state licensure in California.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (76.5 units)

###### First Quarter

AHS 50A Introduction to Allied Health Programs (1.5 units)  
 AHS 60C Advanced Cardiac Life Support (2 units)  
 EMS 60A Paramedic Cognitive & Affective IA (9 units)  
 EMS 60B Paramedic Cognitive, Psychomotor & Affective IB (3 units)

###### Second Quarter

AHS 50B Interprofessional Patient Competencies (0.5 unit)  
 EMS 61A Paramedic Cognitive & Affective IIA (9 units)  
 EMS 61B Paramedic Cognitive, Affective & Psychomotor IIB (3 units)  
 EMS 63A Paramedic Hospital Specialty Rotations (2 units)

###### Third Quarter

AHS 60D Pediatric Advanced Life Support (AHA PALS) (2 units)  
 AHS 60F Prehospital Trauma Life Support (PHTLS) (2 units)  
 EMS 62A Paramedic Cognitive & Affective IIIA (9 units)  
 EMS 62B Paramedic Cognitive, Affective & Psychomotor IIIB (3 units)

###### Fourth Quarter

EMS 63B<sup>[27]</sup> Paramedic Hospital Emergency Department Rotations (4.5 units)

###### Fifth Quarter

EMS 64A<sup>[27]</sup> Paramedic Ambulance Field Internship I (13 units)

###### Sixth Quarter

EMS 64B<sup>[27]</sup> Paramedic Ambulance Field Internship II (13 units)

<sup>[27]</sup> Students may have the option of completing the program in five quarters, by taking EMS 63B during the third quarter, 64A during the fourth quarter, and 64B during the fifth quarter. For more information, contact program staff.

##### Certificate of Achievement in Paramedic (76.5 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required; however, the program prerequisite requirements must be met.

## PERSONAL TRAINER

### Program Type(s): Certificate of Achievement

Units required for certificate: 37

#### PROGRAM LEARNING OUTCOMES

In addition to demonstrating competency in required coursework, graduates will have important job skills in the areas of interpersonal interaction, communication, creativity, honesty, leadership and motivation, teamwork, patience, enthusiasm, and the ability to work with a diversity of people and run a business.

##### Certificate of Achievement in Personal Trainer (37 units)

BUSI 95 Entrepreneurship-The Business Plan (4 units)  
 ITRN 50 Internship (1 unit)  
 KINS 8A Theory & Concepts of Exercise Physiology I (5 units)  
 KINS 8B Theory & Concepts of Exercise Physiology II (5 units)  
 KINS 9 Basic Nutrition for Sports & Fitness (5 units)  
 KINS 15 First Aid & CPR/AED (1 unit)  
 KINS 48 Fitness Assessment Techniques for the Personal Trainer (4 units)  
 KINS 53 Current Topics in Personal Training (2 units)  
 KINS 65A PNF: Introduction to the Upper Extremity (3 units)  
 KINS 65B PNF: Introduction to the Lower Extremity (3 units)  
 KINS 81 Introduction to Adaptive Fitness (4 units)

## PHARMACY TECHNICIAN

### Program Type(s): Associate in Science Degree, Certificate of Achievement

Units required for major: 52, certificate: 52

#### PROGRAM LEARNING OUTCOMES

- Graduates will demonstrate pharmaceutical knowledge, clinical skills and values necessary to practice as a competent pharmacy technician in both retail and hospital pharmacy settings.
- Graduates will demonstrate competency with entry-level clinical skills in accordance with ASHP/ACPE accreditation requirements.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (52 units)

###### Summer

AHS 50A Introduction to Allied Health Programs (1.5 units)

###### Fall

PHT 50 Orientation to Pharmacy Technology (3 units)  
 PHT 51 Basic Pharmaceutics (3 units)  
 PHT 52A Inpatient Dispensing (3 units)  
 PHT 53 Ambulatory Pharmacy Practice (4 units)  
 PHT 54A Dosage Calculations A (3 units)  
 PHT 55A Pharmacology A (3 units)

###### Winter

AHS 50B Interprofessional Patient Competencies (0.5 unit)  
 PHT 52B Aseptic Technique & IV Preparation (4 units)  
 PHT 54B Dosage Calculations B (3 units)  
 PHT 55B Pharmacology B (3 units)  
 PHT 56A Dispensing & Compounding A (3 units)  
 PHT 61 Home Health Care Supplies (3 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

Spring  
 PHT 55C Pharmacology C (3 units)  
 PHT 56B Dispensing & Compounding B (3 units)  
 PHT 63 Pharmacy Technician Certification Exam (PTCE) Review (1 unit)  
 PHT 60 Retail Clinical (4 units)  
 PHT 62 Hospital Clinical (4 units)

### Certificate of Achievement in Pharmacy Technician (52 units)

The certificate of achievement is awarded upon completion of the core courses. General education courses are not required; however, the program prerequisite requirements must be met.

## PHILOSOPHY

### Program Type(s): Associate in Arts Degree

Units required for major: 33-34

### PROGRAM LEARNING OUTCOMES

- Students will be able to critically analyze and evaluate arguments regarding issues of metaphysics and epistemology.
- Students will be able to critically analyze and evaluate arguments regarding issues of ethics and political philosophy.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (13 units)

PHIL 2 Introduction to Social & Political Philosophy (4 units)  
 PHIL 4 Introduction to Philosophy (4 units)  
 PHIL 8 Ethics (5 units)

#### Support Courses: (20-21 units)

Select ONE course from the following:

PHIL 1 Critical Thinking & Writing (5 units)  
 PHIL 7 Introduction to Symbolic Logic (5 units)  
 PHIL 30 Introduction to Critical Thinking (4 units)

And 8 units from the following:

PHIL 11 Introduction to the Philosophy of Art & Aesthetics (4 units)  
 PHIL 12 Philosophy of Science (4 units)  
 PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)  
 PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 PHIL 25 Comparative World Religions: West (4 units)

And 8 units<sup>[28]</sup> from the following:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Modernism (4.5 units)  
 ART 2F Introduction to Asian Art (4.5 units)

BUSI 70 Business & Professional Ethics (4 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 18 Introduction to Middle Eastern Civilization (4 units)  
 HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)  
 HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)  
 HUMN 5 Cultures, Civilizations & Ideas: The Modern World (4 units)  
 HUMN 6 The Shock of the New: From the Modern to the Contemporary (4 units)  
 POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
 or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)  
 POLI 9 Political Economy (4 units)  
 or POLI 9H Honors Political Economy (4 units)  
 PSYC 1 General Psychology (5 units)  
 or PSYC 1H Honors General Psychology (5 units)  
 PSYC 4 Introduction to Biopsychology (4 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)

<sup>[28]</sup> Students may also use courses listed in the second section of support courses to fulfill the requirement for the third section of support courses.

## ASSOCIATE DEGREE FOR TRANSFER-PHILOSOPHY

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to critically analyze and evaluate arguments regarding issues of metaphysics and epistemology.
- Students will be able to critically analyze and evaluate arguments regarding issues of ethics and political philosophy.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (9-10 units)

PHIL 7 Introduction to Symbolic Logic (5 units)

And ONE of the following:

PHIL 4 Introduction to Philosophy (4 units)  
 PHIL 8 Ethics (5 units)

#### Support Courses: (20-23 units)

Complete TWO courses from List A:

List A:

Any course not used from the core courses, or any of the following:  
 PHIL 1 Critical Thinking & Writing (5 units)  
 PHIL 2 Introduction to Social & Political Philosophy (4 units)  
 PHIL 4<sup>[29]</sup> Introduction to Philosophy (4 units)  
 PHIL 8<sup>[29]</sup> Ethics (5 units)  
 PHIL 20A History of Western Philosophy from Socrates through St. Thomas (4 units)  
 PHIL 20B History of Western Philosophy from the Renaissance through Kant (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

PHIL 30 Introduction to Critical Thinking (4 units)

<sup>[29]</sup> If not used to fulfill the core requirement.

And TWO items from List B:

List B:

1. Any course not used in List A
2. HIST 4A History of Western Civilization to 800 CE (4 units)
3. HIST 4B History of Western Civilization: 700-1800 (4 units)
- and<sup>[30]</sup> HIST 4C History of Western Civilization 1789-Present (4 units)
4. HIST 4B History of Western Civilization: 700-1800 (4 units)
- and<sup>[30]</sup> HIST 4CH Honors History of Western Civilization 1789-Present (4 units)
5. PHIL 24 Comparative World Religions: East (4 units)
- or PHIL 25 Comparative World Religions: West (4 units)

<sup>[30]</sup> When using item 3 or 4 in this section, both courses must be completed to fulfill the requirement.

And ONE course from List C:

List C:

- Any course not used in List A or List B, or any of the following:
- ENGL 16 Introduction to Literature (4 units)
- ENGL 22 Women Writers (4 units)
- HUMN 1 Cultures, Civilizations & Ideas: The Ancient World (4 units)
- HUMN 2 Cultures, Civilizations & Ideas: Of Empires & Conflict (4 units)
- HUMN 3 World Myths in Literature Arts & Film (4 units)
- or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)
- PHIL 12 Philosophy of Science (4 units)

## PHOTOGRAPHY

**Program Type(s): Associate in Arts Degree, Certificate of Achievement, Skills Certificate [Non-Transcriptable]**

Units required for major: 40, certificate: 12-40

### PROGRAM LEARNING OUTCOMES

- Students will be able to produce images that demonstrate knowledge of photography's visual and expressive elements (light, color, and composition), using standard professional equipment and production processes.
- Students will be able to analyze how images reflect and shape our culture and assess the contributions made in the field by people from diverse cultures and backgrounds.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (32 units)

- PHOT 4A Photoshop for Photographers I (4 units)
- PHOT 4B Photoshop for Photographers II (4 units)
- PHOT 4C Photoshop for Photographers III (4 units)
- PHOT 5 Introduction to Photography (4 units)
- PHOT 10 History of Photography (4 units)
- or PHOT 10H Honors History of Photography (4 units)
- PHOT 57B Professional Practices in Photography (4 units)
- PHOT 72 Lightroom & Photographic Design (4 units)
- PHOT 74A Studio Photography Techniques I (4 units)
- or PHOT 71 The Photographic Book (4 units)

#### Support Courses: (8 units)

Select 8 units from the following:

- ART 5A 2-D Foundations (4 units)
- ART 6 Collage & Composition (4 units)
- ART 20A Color I (4 units)
- PHOT 8 Photography of Multicultural America (4 units)
- or PHOT 8H Honors Photography of Multicultural America (4 units)
- PHOT 11 Contemporary Issues in Photography (4 units)
- or PHOT 11H Honors Contemporary Issues in Photography (4 units)
- PHOT 22 Photojournalism (4 units)
- PHOT 57A Photographic Portfolio Development (4 units)
- PHOT 68C Studio Lighting Topics in Photography (1 unit)
- PHOT 68E Lecture Topics in Photography (1 unit)
- PHOT 70R Independent Study in Photography (1 unit)
- PHOT 71R Independent Study in Photography (2 units)
- PHOT 72R Independent Study in Photography (3 units)
- PHOT 73R Independent Study in Photography (4 units)
- PHOT 71 The Photographic Book (4 units)
- PHOT 74A Studio Photography Techniques I (4 units)
- PHOT 74B Studio Photography Techniques II (4 units)
- PHOT 78A Landscape Field Study in Photography (1 unit)
- PHOT 78B Social Concerns Field Study in Photography (1 unit)
- PHOT 78C Documentary Field Study in Photography (1 unit)
- PHOT 78D Museum/Gallery Field Study in Photography (1 unit)

*NOTE: Courses listed in both the core and support sections may be completed only once for credit to satisfy either the core or support course requirement.*

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

**Certificate of Achievement in Photography (40 units)**

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required. The minimum proficiency requirements for this certificate are ENGL 1A, 1AH, or 1S & 1T, and MATH 17, 105 or 108 completed with a letter grade of "C" or better.

**Certificate of Achievement in Digital Photography (30 units)**

There are no English or mathematics proficiencies required for this certificate.

PHOT 1 Black & White Photography I (4 units)  
or PHOT 5 Introduction to Photography (4 units)  
PHOT 4A Photoshop for Photographers I (4 units)  
PHOT 4B Photoshop for Photographers II (4 units)  
PHOT 4C Photoshop for Photographers III (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)  
PHOT 71 The Photographic Book (4 units)  
PHOT 72 Lightroom & Photographic Design (4 units)  
And 2 units from the support courses list for the degree.

**Photo Criticism Skills Certificate (12 units)****[Non-Transcriptable]**

There are no English or mathematics proficiencies required for this certificate.

PHOT 5 Introduction to Photography (4 units)  
PHOT 8 Photography of Multicultural America (4 units)  
or PHOT 8H Honors Photography of Multicultural America (4 units)  
or PHOT 11 Contemporary Issues in Photography (4 units)  
or PHOT 11H Honors Contemporary Issues in Photography (4 units)  
PHOT 10 History of Photography (4 units)  
or PHOT 10H Honors History of Photography (4 units)

**PHYSICAL EDUCATION****Program Type(s): Associate in Arts Degree**

Units required for major: 37-38

**PROGRAM LEARNING OUTCOMES**

- The student will complete this program with the ability to communicate the components of a physical education program to their professional staff.
- The student will demonstrate the necessary knowledge, skills, and values of a multi-disciplinary program, which satisfy core requirements for many physical education transfer majors, including the traditional concentrations in teaching and contemporary choices of fitness, dance and athletic emphasis.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (31-32 units)**

BIOL 10 General Biology: Basic Principles (5 units)  
or BIOL 14 Human Biology (5 units)  
KINS 1 Introduction to Kinesiology (5 units)  
KINS 2 Sport in Society (5 units)  
KINS 3 Theories & Techniques of Coaching Sports (4 units)  
or DANC 10 Topics in Dance History (5 units)  
KINS 4 Concepts of Physical Fitness & Wellness (4 units)  
KINS 8A Theory & Concepts of Exercise Physiology I (5 units)  
KINS 16B Emergency Athletic Injury Care (3 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

**Support Courses: (6 units)**

Select 6 units of any combination of activity courses from:  
KINS 10 Women in Sports (5 units)  
KINS 15 First Aid & CPR/AED (1 unit)  
KINS 51 Performance Enhancing Substances in Sport & Exercise (4 units)  
KINS 54 Introduction to Sports Management (4 units)  
any Physical Education (PHED) activity course  
any Athletics (ATHL) course  
any Dance (DANC) activity course

**Elective Courses: (Recommended units)**

These courses are recommended to fulfill the additional elective requirements to reach 90 units for the degree as they augment the major:

BIOL 40A Human Anatomy & Physiology I (5 units)  
BIOL 40B Human Anatomy & Physiology II (5 units)  
BIOL 40C Human Anatomy & Physiology III (5 units)  
CHEM 25 Fundamentals of Chemistry (5 units)  
or CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
DANC 10<sup>[31]</sup> Topics in Dance History (5 units)  
KINS 9 Basic Nutrition for Sports & Fitness (5 units)  
KINS 15<sup>[31]</sup> First Aid & CPR/AED (1 unit)  
KINS 16A Prevention of Athletic Injuries (3 units)  
KINS 16C Treatment & Rehabilitation of Athletic Injuries (3 units)  
KINS 51<sup>[31]</sup> Performance Enhancing Substances in Sport & Exercise (4 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)

<sup>[31]</sup> May be completed only once for credit to satisfy degree requirements.

**PHYSICS****Program Type(s): Associate in Science Degree**

Units required for major: 59

**PROGRAM LEARNING OUTCOMES**

- Students will know basic physics principles.
- Students will be able to apply their knowledge to practical, theoretical and experimental problems.
- Students will be prepared to advance to the next step in careers in science, industry and education.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (59 units)**

CHEM 1A General Chemistry (5 units)  
or CHEM 1AH Honors General Chemistry (5 units)  
CHEM 1B General Chemistry (5 units)  
or CHEM 1BH Honors General Chemistry (5 units)  
MATH 1B Calculus (5 units)  
or MATH 1BH Honors Calculus II (5 units)  
MATH 1C Calculus (5 units)  
MATH 1D Calculus (5 units)  
MATH 2A Differential Equations (5 units)  
MATH 2B Linear Algebra (5 units)  
PHYS 4A General Physics (Calculus) (6 units)  
PHYS 4B General Physics (Calculus) (6 units)  
PHYS 4C General Physics (Calculus) (6 units)  
PHYS 4D General Physics (Calculus) (6 units)



## ASSOCIATE DEGREE FOR TRANSFER-PHYSICS

### Program Type(s): Associate in Science for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will know basic physics principles.
- Students will be able to apply their knowledge to practical, theoretical and experimental problems.
- Students will be prepared to advance to the next step in careers in science, industry and education.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (44 units)

MATH 1A Calculus (5 units)  
 or MATH 1AH Honors Calculus I (5 units)  
 MATH 1B Calculus (5 units)  
 or MATH 1BH Honors Calculus II (5 units)  
 MATH 1C Calculus (5 units)  
 MATH 1D Calculus (5 units)  
 PHYS 4A General Physics (Calculus) (6 units)  
 PHYS 4B General Physics (Calculus) (6 units)  
 PHYS 4C General Physics (Calculus) (6 units)  
 PHYS 4D General Physics (Calculus) (6 units)

## POLITICAL SCIENCE

### Program Type(s): Associate in Arts Degree

Units required for major: 35

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate critical, analytical, research and writing skills in political science and its sub-fields using basic scientific tools underlying modern social science.
- Students will be able to analyze the major theoretical formulations and concepts of political science and its sub-fields and the philosophical basis of those formulations.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (18 units)

POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
 POLI 2 Comparative Government & Politics (4 units)  
 or POLI 2H Honors Comparative Government & Politics (4 units)  
 POLI 3 Introduction to Political Philosophy/Political Theory (5 units)  
 or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)

##### Support Courses: (17 units)

Select 9 units from the following:

ECON 1A Principles of Macroeconomics (5 units)  
 HIST 9 History of Contemporary Europe (4 units)  
 or HIST 9H Honors History of Contemporary Europe (4 units)  
 HIST 17A History of the United States to 1815 (4 units)  
 or HIST 17B History of the United States from 1812 to 1914 (4 units)  
 or HIST 17C History of the United States 1914 to the Present (4 units)

or HIST 17CH Honors History of the United States 1914 to the Present (4 units)

POLI 9 Political Economy (4 units)

or POLI 9H Honors Political Economy (4 units)

or ECON 9 Political Economy (4 units)

or ECON 9H Honors Political Economy (4 units)

And 8 units<sup>[32]</sup> from the following:

ECON 25 The Global Economy (4 units)

HIST 8 History of Latin America (4 units)

HIST 18 Introduction to Middle Eastern Civilization (4 units)

HIST 20 History of Russia & The Soviet Union (4 units)

GIST 11 Introduction to Mapping & Spatial Reasoning (4 units)

or GEOG 11 Introduction to Mapping & Spatial Reasoning (4 units)

SOC 15 Law & Society (4 units)

<sup>[32]</sup>Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

## ASSOCIATE DEGREE FOR TRANSFER-POLITICAL SCIENCE

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate critical, analytical, research and writing skills in political science and its sub-fields using basic scientific tools underlying modern social science.
- Students will be able to analyze the major theoretical formulations and concepts of political science and its sub-fields and the philosophical basis of those formulations.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (5 units)

POLI 1 Political Science: Introduction to American Government & Politics (5 units)

##### Support Courses: (21-24 units)

Complete THREE courses from List A:

List A:

MATH 10 Elementary Statistics (5 units)

or PSYC 7 Statistics for the Behavioral Sciences (5 units)

or SOC 7 Statistics for the Behavioral Sciences (5 units)

POLI 2 Comparative Government & Politics (4 units)

or POLI 2H Honors Comparative Government & Politics (4 units)

POLI 3 Introduction to Political Philosophy/Political Theory (5 units)

or POLI 3H Honors Introduction to Political Philosophy/Political Theory (5 units)

POLI 15 International Relations/World Politics (4 units)

or POLI 15H Honors International Relations/World Politics (4 units)

And complete ONE course each from two sections of the four List B sections, below:

List B:

Section #1:

Any course not used from List A

Section #2:

POLI 9 Political Economy (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

or POLI 9H Honors Political Economy (4 units)  
 or ECON 9 Political Economy (4 units)  
 or ECON 9H Honors Political Economy (4 units)

#### Section #3:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 BUSI 18 Business Law I (5 units)  
 ECON 1A Principles of Macroeconomics (5 units)  
 ECON 1B Principles of Microeconomics (5 units)

#### Section #4:

GEOG 5 Introduction to Economic Geography (4 units)  
 HIST 4A History of Western Civilization to 800 CE (4 units)  
 HIST 4B History of Western Civilization: 700-1800 (4 units)  
 HIST 4C History of Western Civilization 1789-Present (4 units)  
 or HIST 4CH Honors History of Western Civilization 1789-Present (4 units)  
 HIST 17A History of the United States to 1815 (4 units)  
 HIST 17B History of the United States from 1812 to 1914 (4 units)  
 HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)  
 SOC 10 Research Methods & Designs (5 units)  
 or PSYC 10 Research Methods & Designs (5 units)  
 SOC 11 Introduction to Social Welfare (5 units)  
 SOC 14 Sociology of Crime (4 units)  
 SOC 15 Law & Society (4 units)  
 SOC 20 Major Social Problems (4 units)  
 SOC 23 Race & Ethnic Relations (4 units)  
 WMN 11 Women in Global Perspective (4 units)

## POPULAR CULTURE

### Program Type(s): Certificate of Proficiency [Non-Transcriptable]

Units required for certificate: 16-17

### Popular Culture Certificate of Proficiency (16-17 units) [Non-Transcriptable]

MDIA 11 Introduction to Popular Culture (4 units)  
 MDIA 12 Popular Culture & United States History (4 units)  
 SOC 8 Popular Culture (4 units)

And ONE course from the following:

BUSI 57 Principles of Advertising (4 units)  
 COMM 10 Gender, Communication & Culture (5 units)  
 GID 1 History of Graphic Design (4 units)  
 or ART 36 History of Graphic Design (4 units)  
 HUMN 3 World Myths in Literature Arts & Film (4 units)  
 or HUMN 3H Honors World Myths in Literature Arts & Film (4 units)  
 KINS 2 Sport in Society (5 units)  
 MDIA 2C Current Trends in Film, TV & the Internet (4 units)  
 MDIA 5 American Cinema (4 units)  
 MDIA 13 Video Games & Popular Culture (4 units)  
 or MUS 11F Video Games & Popular Culture (4 units)  
 MUS 7 Contemporary Musical Styles: Rock, Pop & Jazz (4 units)  
 MUS 9A Music & Media: Edison to Hendrix (4 units)  
 or MUS 9B Music & Media: Hendrix to Hip-Hop (4 units)

## PSYCHOLOGY

### Program Type(s): Associate in Arts Degree

Units required for major: 35

### PROGRAM LEARNING OUTCOMES

- Students will be able to recognize the diversity of behavior of various populations and be able to explain, interpret, apply, and evaluate a broad base of concepts in the different fields of psychology.
- Students will be able to apply critical thinking skills and psychological theories to real-world situations, and to be able to apply research methodology and data analysis in the process of answering questions about human behavior.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (15 units)

PSYC 1 General Psychology (5 units)  
 or PSYC 1H Honors General Psychology (5 units)  
 PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 or MATH 10 Elementary Statistics (5 units)  
 PSYC 10 Research Methods & Designs (5 units)  
 or SOC 10 Research Methods & Designs (5 units)

#### Support Courses: (20 units)

Select 12 units from the following:

PSYC 4 Introduction to Biopsychology (5 units)  
 PSYC 9 Positive Psychology (4 units)  
 PSYC 14 Child & Adolescent Development (4 units)  
 PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
 or WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
 PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
 PSYC 25 Introduction to Abnormal Psychology (4 units)  
 PSYC 30 Social Psychology (4 units)  
 or SOC 30 Social Psychology (4 units)  
 PSYC 33 Introduction to Personality Psychology (4 units)  
 PSYC 39 Psychology of Sports (4 units)  
 PSYC 40 Human Development (5 units)  
 PSYC 49 Human Sexuality (4 units)

and 8 units<sup>[33]</sup> from the following:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 BIOL 14 Human Biology (5 units)  
 PHIL 4 Introduction to Philosophy (4 units)  
 PSYC 51 Applied Research Experience (1 unit)  
 PSYC 54H Honors Institute Seminar in Psychology (1 unit)  
 PSYC 70R Independent Study in Psychology (1 unit)  
 PSYC 71R Independent Study in Psychology (2 units)  
 PSYC 72R Independent Study in Psychology (3 units)  
 PSYC 73R Independent Study in Psychology (4 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)  
 SOC 28 Sociology of Gender (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 SPED 2 Psychological Aspects of Disability (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)

<sup>[33]</sup> Students may also use courses listed in the first section of support courses to fulfill the requirement for the second section of support courses.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

**ASSOCIATE DEGREE FOR TRANSFER-PSYCHOLOGY****Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to recognize the diversity of behavior of various populations and be able to explain, interpret, apply, and evaluate a broad base of concepts in the various fields of psychology.
- Students will be able to apply critical thinking skills and psychological theories to real-world situations, and to be able to apply research methodology and data analysis in the process of answering questions about human behavior.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (20 units)**

PSYC 1 General Psychology (5 units)

or PSYC 1H Honors General Psychology (5 units)

PSYC 7 Statistics for the Behavioral Sciences (5 units)

or SOC 7 Statistics for the Behavioral Sciences (5 units)

or MATH 10 Elementary Statistics (5 units)

PSYC 10 Research Methods &amp; Designs (5 units)

or SOC 10 Research Methods &amp; Designs (5 units)

And ONE of the following:

BIOL 10 General Biology: Basic Principles (5 units)

BIOL 14 Human Biology (5 units)

PSYC 4 Introduction to Biopsychology (5 units)

**Support Courses: (8-10 units)**

Select ONE course each from List A and List B; any course that was not selected from List A may also be used to satisfy List B.

List A:

ENGL 1A Composition &amp; Reading (5 units)

or ENGL 1AH Honors Composition &amp; Reading (5 units)

ENGL 1B Composition, Critical Reading &amp; Thinking through Literature (5 units)

or ENGL 1BH Honors Composition, Critical Reading &amp; Thinking through Literature (5 units)

MATH 1A Calculus (5 units)

or MATH 1AH Honors Calculus I (5 units)

PHIL 1 Critical Thinking &amp; Writing (5 units)

PSYC 14 Child &amp; Adolescent Development (4 units)

PSYC 30 Social Psychology (4 units)

or SOC 30 Social Psychology (4 units)

PSYC 40 Human Development (5 units)

SOC 1 Introduction to Sociology (5 units)

or SOC 1H Honors Introduction to Sociology (5 units)

List B:

ANTH 1 Introduction to Physical Anthropology (4 units)

or ANTH 1H Honors Introduction to Physical Anthropology (4 units)

ANTH 2A Cultural Anthropology (4 units)

or ANTH 2AH Honors Cultural Anthropology (4 units)

PSYC 9 Positive Psychology (4 units)

PSYC 21 Psychology of Women: Sex &amp; Gender Differences (4 units)

or WMN 21 Psychology of Women: Sex &amp; Gender Differences (4 units)

PSYC 22 Psychology of Prejudice &amp; Discrimination (4 units)

PSYC 25 Introduction to Abnormal Psychology (4 units)

PSYC 33 Introduction to Personality Psychology (4 units)

PSYC 39 Psychology of Sports (4 units)

PSYC 49 Human Sexuality (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

**ASSOCIATE DEGREE FOR TRANSFER-PUBLIC HEALTH SCIENCE****Program Type(s): Associate in Science for Transfer Degree**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Students will be able to identify, assess, utilize and articulate credible information resources on personal and public health current issues, such as the Internet, social media, media outlets, and libraries.
- Students will be able to effectively communicate strategies or tactics to improve health inequalities, such as advocacy, community organizing, and/or policy change.
- Students will obtain a critical understanding and apply knowledge of Personal and Public Health in real life settings from the sub-disciplines of Human Anatomy and Physiology, Statistics, Chemistry, and Psychology.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (44-45 units)**

BIOL 1A Principles of Cell Biology (6 units)

or BIOL 10 General Biology: Basic Principles (5 units)

or BIOL 14 Human Biology (5 units)

BIOL 40A Human Anatomy &amp; Physiology I (5 units)

BIOL 40B Human Anatomy &amp; Physiology II (5 units)

BIOL 40C Human Anatomy &amp; Physiology III (5 units)

CHEM 25 Foundations of Chemistry (5 units)

HLTH 20 Introduction to Public Health (5 units)

HLTH 21 Contemporary Health Concerns (4 units)

MATH 10 Elementary Statistics (5 units)

or PSYC 7 Statistics for the Behavioral Sciences (5 units)

or SOC 7 Statistics for the Behavioral Sciences (5 units)

PSYC 1 General Psychology (5 units)

or PSYC 1H Honors General Psychology (5 units)

**Support Courses: (4-6 units)**

Complete ONE course from the following:

ACTG 1A Financial Accounting I (5 units)

BIOL 41 Microbiology (6 units)

BIOL 45 Introduction to Human Nutrition (4 units)

ECON 1A Principles of Macroeconomics (5 units)

ECON 1B Principles of Microeconomics (5 units)

HLTH 22 Health &amp; Social Justice (4 units)

HLTH 23 Drugs, Health &amp; Society (4 units)

KINS 1 Introduction to Kinesiology (5 units)

PHYS 12 Introduction to Modern Physics (5 units)

PSYC 40 Human Development (5 units)

PSYC 49 Human Sexuality (4 units)

SOC 1 Introduction to Sociology (5 units)

or SOC 1H Honors Introduction to Sociology (5 units)

**RADIOLOGIC TECHNOLOGY****Program Type(s): Associate in Science Degree**

Units required for major: 115.5

**PROGRAM LEARNING OUTCOMES**

- Graduates will demonstrate entry-level competency skills in accordance with national and state regulatory agencies.
- Graduates will value and implement proper radiation safety for patients, self, and others.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (115.5 units)**

## FIRST YEAR

## Summer

AHS 50A Introduction to Allied Health Programs (1.5 units)  
 R T 50 Orientation to Radiation Science Technologies (2 units)  
 R T 53 Orientation to Radiologic Technology (1 unit)

## Fall

R T 51A Fundamentals of Radiologic Technology I (4 units)  
 R T 53A Applied Radiographic Technology I (4.5 units)  
 R T 53AL Applied Radiographic Technology Laboratory I (1 unit)  
 R T 54A Basic Patient Care for Imaging Technology (2 units)  
 R T 55A Principles of Radiologic Technology I (3 units)

## Winter

AHS 50B Interprofessional Patient Competencies (0.5 unit)  
 R T 51B Fundamentals of Radiologic Technology II (4 units)  
 R T 53B Applied Radiographic Technology II (4.5 units)  
 R T 53BL Applied Radiographic Technology Laboratory II (1 unit)  
 R T 54B Law & Ethics in Medical Imaging (2 units)  
 R T 55B Principles of Radiologic Technology II (3 units)

## Spring

R T 51C Fundamentals of Radiologic Technology III (4 units)  
 R T 53C Applied Radiographic Technology III (4.5 units)  
 R T 53CL Applied Radiographic Technology Laboratory III (1 unit)  
 R T 54C Radiographic Pathology (3 units)  
 R T 55C Principles of Radiologic Technology III (3 units)

## Summer (10 weeks)

R T 53D Applied Radiologic Technology IV (9 units)  
 R T 64 Fluoroscopy (4 units)  
 R T 72 Venipuncture (1.5 units)

## SECOND YEAR

## Fall

R T 52D Digital Image Acquisition & Display (3 units)  
 R T 61A Radiology Research Project I (1 unit)  
 R T 62A Advanced Modalities in Imaging (3 units)  
 R T 63A Radiographic Clinical Practicum I (10.5 units)

## Winter

R T 61B Radiology Research Project II (1 unit)  
 R T 62B Special Procedures & Equipment (3 units)  
 R T 63B Radiographic Clinical Practicum II (10.5 units)  
 R T 65 Mammography (3 units)

## Spring

R T 62C Professional Development in Radiology (3 units)  
 R T 63 Advanced Radiographic Principles (3 units)  
 R T 63C Radiographic Clinical Practicum III (10.5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

**RESPIRATORY THERAPY****Program Type(s): Associate in Science Degree, Certificate of Achievement**

Units required for major: 99, certificate: 18

**PROGRAM LEARNING OUTCOMES**

- Graduates will have acquired the necessary knowledge, skills and values for the practice of respiratory therapy.
- Graduates will be able to demonstrate appropriate critical thinking skills, time management skills, communication skills and technical skills necessary to provide competent respiratory care in multidisciplinary care settings.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (99 units)**

## FIRST YEAR

## Fall

AHS 50A Introduction to Allied Health Programs (1.5 units)  
 RSPT 50A Respiratory Therapy Procedures (4.5 units)  
 RSPT 51A Introduction to Respiratory Anatomy & Physiology (2 units)  
 RSPT 52 Applied Science for Respiratory Therapy (3 units)  
 RSPT 54 Orientation to Respiratory Care (2 units)  
 RSPT 55A Mediated Studies in Respiratory Therapy I (0.5 unit)

## Winter

AHS 50B Interprofessional Patient Competencies (0.5 unit)  
 BIOL 41 Microbiology (6 units)  
 RSPT 50B Introduction to Procedures & Hospital Orientation (6 units)  
 RSPT 53A Introduction to Respiratory Therapy Pharmacology (2 units)  
 RSPT 55B Mediated Studies in Respiratory Therapy II (0.5 unit)

## Spring

RSPT 50C Therapeutics & Introduction to Mechanical Ventilation (5 units)  
 RSPT 51B Respiratory Physiology (3 units)  
 RSPT 51C Patient Assessment & Pulmonary Disease (4 units)  
 RSPT 55C Mediated Studies in Respiratory Therapy III (0.5 unit)

## Summer (6 weeks)

RSPT 55D Mediated Studies in Respiratory Therapy IV (0.5 unit)  
 RSPT 61A Adult Mechanical Ventilation (4 units)  
 RSPT 70A Clinical Rotation I (2 units)

## SECOND YEAR

## Fall

AHS 60A Cardiology for Allied Health (2 units)  
 PSYC 1 General Psychology (5 units)  
 or PSYC 1H Honors General Psychology (5 units)  
 RSPT 53B Advanced Respiratory Therapy Pharmacology (2 units)  
 RSPT 55E Mediated Studies in Respiratory Therapy V (0.5 unit)  
 RSPT 61B Neonatal Respiratory Care (3 units)  
 RSPT 70B Clinical Rotation II (8 units)

## Winter

AHS 60C Advanced Cardiac Life Support (2 units)  
 RSPT 55F Mediated Studies in Respiratory Therapy VI (0.5 unit)  
 RSPT 61C Home & Rehabilitative Respiratory Care (2 units)  
 RSPT 63A Advanced Pathophysiology & Patient Management (3 units)  
 RSPT 65 Computer Patient Simulations (0.5 unit)  
 RSPT 70C Clinical Rotation III (8 units)



Spring

AHS 50C Interprofessional Competencies for Collaborative Practice (0.5 unit)  
 RSPT 55G Mediated Studies in Respiratory Therapy VII (0.5 unit)  
 RSPT 60C Pulmonary Diagnostics (3 units)  
 RSPT 61D Pediatric Respiratory Care (2 units)  
 RSPT 62 Management, Resume & National Board Examination (1 unit)  
 RSPT 70D Clinical Rotation IV (8 units)

### Certificate of Achievement in Interventional Pulmonology Assistant (18 units)

RSPT 82 Orientation to Interventional Pulmonology (2 units)  
 RPST 83 Case-Based Analysis & Critical Thinking in Diagnostic Interventional Pulmonology (2 units)  
 RPST 84 Fundamentals of Pulmonary Disease (3 units)  
 RSPT 85 Interventional Pulmonology Theory & Application (3 units)  
 RSPT 86 Interventional Pulmonology Procedures (3 units)  
 RSPT 87A Interventional Pulmonology Clinical Internship I (2 units)  
 RSPT 87B Interventional Pulmonology Clinical Internship II (2 units)  
 RSPT 88 Interventional Pulmonology Research Project (1 unit)

## ASSOCIATE DEGREE FOR TRANSFER-SOCIAL JUSTICE STUDIES

**Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to identify and analyze the causes of race and gender inequality in the United States.
- Students will identify and analyze social policies that have the potential to alleviate race and gender inequalities.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (12-13 units)

SOC 23 Race & Ethnic Relations (4 units)  
 SOC 28 Sociology of Gender (4 units)

And select ONE of the following emphasis options:

Option 1: General Social Justice Studies

Select ONE course from the following:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 COMM 12 Intercultural Communication (5 units)  
 ECON 25 The Global Economy (4 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)  
 WMN 5 Introduction to Women's Studies (4 units)

Option 2: Gender and Sexuality

WMN 5 Introduction to Women's Studies (4 units)

Option 3: Race and Ethnicity

Select ONE course from the following:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 COMM 12 Intercultural Communication (5 units)

### Support Courses: (16-20 units)

List A:

For Option 1: General Social Justice Studies, complete FOUR courses from at least three areas, below:

Area 1: History or Government:

HIST 17B History of the United States from 1812 to 1914 (4 units)  
 HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)  
 POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
 POLI 15<sup>[34]</sup> International Relations/World Politics (4 units)  
 or POLI 15H<sup>[34]</sup> Honors International Relations/World Politics (4 units)

Area 2: Arts and Humanities:

ART 2E A History of Women in Art (4.5 units)  
 ART 2F Introduction to Asian Art (4.5 units)  
 ART 2J American Art (4.5 units)  
 ENGL 5 LGBT Literature (4 units)  
 ENGL 7 Native American Literature (4 units)  
 ENGL 12 African American Literature (4 units)  
 ENGL 22 Women Writers (4 units)  
 ENGL 31 Latino/a Literature (4 units)  
 ENGL 40 Asian American Literature (4 units)  
 MDIA 3 Introduction to Film & Media Criticism (4 units)  
 MDIA 11 Introduction to Popular Culture (4 units)  
 or MDIA 11H Honors Introduction to Popular Culture (4 units)  
 MUS 8 Music of Multicultural America (5 units)  
 or MUS 8H Honors Music of Multicultural America (5 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 PHIL 25 Comparative World Religions: West (4 units)  
 PHOT 8 Photography of Multicultural America (4 units)  
 or PHOT 8H Honors Photography of Multicultural America (4 units)  
 THTR 8 Multicultural Theatre Arts in Modern America (4 units)

Area 3: Social Science:

ANTH 2A<sup>[34]</sup> Cultural Anthropology (4 units)  
 or ANTH 2AH<sup>[34]</sup> Honors Cultural Anthropology (4 units)  
 ANTH 4 First Peoples of North America (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 20 Native Peoples of California (4 units)  
 CHLD 51A Affirming Diversity in Education (4 units)  
 COMM 10 Gender, Communication & Culture (5 units)  
 COMM 12<sup>[34]</sup> Intercultural Communication (5 units)  
 ECON 25<sup>[34]</sup> The Global Economy (4 units)  
 GEOG 2 Human Geography (4 units)  
 HIST 10 History of California: The Multicultural State (4 units)  
 HLTH 20 Introduction to Public Health (5 units)  
 PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
 or WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
 PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
 PSYC 49 Human Sexuality (4 units)  
 SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
 WMN 11 Women in Global Perspective (4 units)

Area 4: Quantitative Reasoning and Research Methods:

MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 PSYC 10 Research Methods & Designs (5 units)  
 or SOC 10 Research Methods & Designs (5 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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## Area 5: Major Preparation:

ANTH 2A<sup>[34]</sup> Cultural Anthropology (4 units)  
 or ANTH 2AH<sup>[34]</sup> Honors Cultural Anthropology (4 units)  
 COMM 12<sup>[34]</sup> Intercultural Communication (5 units)  
 ECON 25<sup>[34]</sup> The Global Economy (4 units)  
 POLI 15<sup>[34]</sup> International Relations/World Politics (4 units)  
 or POLI 15H<sup>[34]</sup> Honors International Relations/World Politics (4 units)  
 SOC 1<sup>[34]</sup> Introduction to Sociology (5 units)  
 or SOC 1H<sup>[34]</sup> Honors Introduction to Sociology (5 units)  
 SOC 20 Major Social Problems (4 units)

<sup>[34]</sup> May be completed only once for credit to satisfy either the core or support course requirement.

For Option 2: Gender and Sexuality, complete FOUR courses from at least three areas, below:

## Area 1: History or Government:

HIST 17B History of the United States from 1812 to 1914 (4 units)  
 HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)  
 POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)

## Area 2: Arts and Humanities:

ART 2E A History of Women in Art (4.5 units)  
 ENGL 5 LGBT Literature (4 units)  
 ENGL 22 Women Writers (4 units)

## Area 3: Social Science:

COMM 10 Gender, Communication & Culture (5 units)  
 HLTH 20 Introduction to Public Health (5 units)  
 PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)  
 or WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
 PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
 PSYC 49 Human Sexuality (4 units)  
 WMN 11 Women in Global Perspective (4 units)

## Area 4: Quantitative Reasoning and Research Methods:

MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 PSYC 10 Research Methods & Designs (5 units)  
 or SOC 10 Research Methods & Designs (5 units)

## Area 5: Major Preparation:

ANTH 2A Cultural Anthropology (4 units)  
 or ANTH 2AH Honors Cultural Anthropology (4 units)  
 COMM 12 Intercultural Communication (5 units)  
 ECON 25 The Global Economy (4 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)  
 SOC 20 Major Social Problems (4 units)

For Option 3: Race and Ethnicity, complete FOUR courses from at least three areas, below:

Area 1: History or Government:  
 HIST 17B History of the United States from 1812 to 1914 (4 units)

HIST 17C History of the United States from 1914 to the Present (4 units)  
 or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)  
 POLI 1 Political Science: Introduction to American Government & Politics (5 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)

## Area 2: Arts and Humanities:

ART 2F Introduction to Asian Art (4.5 units)  
 ART 2J American Art (4.5 units)  
 ENGL 7 Native American Literature (4 units)  
 ENGL 12 African American Literature (4 units)  
 ENGL 31 Latino/a Literature (4 units)  
 ENGL 40 Asian American Literature (4 units)  
 MDIA 3 Introduction to Film & Media Criticism (4 units)  
 MDIA 11 Introduction to Popular Culture (4 units)  
 or MDIA 11H Honors Introduction to Popular Culture (4 units)  
 MUS 8 Music of Multicultural America (5 units)  
 or MUS 8H Honors Music of Multicultural America (5 units)  
 PHIL 24 Comparative World Religions: East (4 units)  
 PHIL 25 Comparative World Religions: West (4 units)  
 PHOT 8 Photography of Multicultural America (4 units)  
 or PHOT 8H Honors Photography of Multicultural America (4 units)

## Area 3: Social Science:

ANTH 2A<sup>[34]</sup> Cultural Anthropology (4 units)  
 or ANTH 2AH<sup>[34]</sup> Honors Cultural Anthropology (4 units)  
 ANTH 4 First Peoples of North America (4 units)  
 ANTH 6 Peoples of Africa (4 units)  
 ANTH 20 Native Peoples of California (4 units)  
 CHLD 51A Affirming Diversity in Education (4 units)  
 COMM 10 Gender, Communication & Culture (5 units)  
 COMM 12<sup>[34]</sup> Intercultural Communication (5 units)  
 ECON 25 The Global Economy (4 units)  
 GEOG 2 Human Geography (4 units)  
 HIST 10 History of California: The Multicultural State (4 units)  
 HLTH 20 Introduction to Public Health (5 units)  
 PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
 SOSC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)

## Area 4: Quantitative Reasoning and Research Methods:

MATH 10 Elementary Statistics (5 units)  
 or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
 or SOC 7 Statistics for the Behavioral Sciences (5 units)  
 PSYC 10 Research Methods & Designs (5 units)  
 or SOC 10 Research Methods & Designs (5 units)

## Area 5: Major Preparation:

ANTH 2A<sup>[34]</sup> Cultural Anthropology (4 units)  
 or ANTH 2AH<sup>[34]</sup> Honors Cultural Anthropology (4 units)  
 COMM 12<sup>[34]</sup> Intercultural Communication (5 units)  
 ECON 25 The Global Economy (4 units)  
 POLI 15 International Relations/World Politics (4 units)  
 or POLI 15H Honors International Relations/World Politics (4 units)  
 SOC 1 Introduction to Sociology (5 units)  
 or SOC 1H Honors Introduction to Sociology (5 units)  
 SOC 20 Major Social Problems (4 units)

<sup>[34]</sup> May be completed only once for credit to satisfy either the core or support course requirement.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## SOCIOLOGY

### Program Type(s): Associate in Arts Degree

Units required for major: 30

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate a working knowledge of the core concepts of sociology: social structure, culture, social stratification and inequality, race, ethnicity, and gender and globalization.
- Students will be able to apply their understanding of sociology to their professional, personal and civic lives.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (17 units)

SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)

And 12 units from the following:

SOC 8 Popular Culture (4 units)  
SOC 10 Research Methods & Designs (5 units)  
or PSYC 10 Research Methods & Designs (5 units)  
SOC 11 Introduction to Social Welfare (5 units)  
SOC 14 Sociology of Crime (4 units)  
SOC 15 Law & Society (4 units)  
SOC 19 Alcohol & Drug Abuse (4 units)  
SOC 20 Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 28 Sociology of Gender (4 units)  
SOC 30 Social Psychology (4 units)  
or PSYC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)

##### Support Courses: (13 units)

Select 13 units from the following:  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
CHLD 51A Affirming Diversity in Education (4 units)  
CHLD 88 Child, Family & Community (4 units)  
ECON 1A Principles of Macroeconomics (5 units)  
ECON 9 Political Economy (4 units)  
or ECON 9H Honors Political Economy (4 units)  
or POLI 9 Political Economy (4 units)  
or POLI 9H Honors Political Economy (4 units)  
GEOG 2 Human Geography (4 units)  
HIST 8 History of Latin America (4 units)  
HIST 9 History of Contemporary Europe (4 units)  
or HIST 9H Honors History of Contemporary Europe (4 units)  
HIST 10 History of California: The Multicultural State (4 units)  
HIST 17C History of the United States from 1914 to the Present (4 units)  
or HIST 17CH Honors History of the United States from 1914 to the Present (4 units)  
MATH 10 Elementary Statistics (5 units)  
or PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
SOC 54H Honors Institute Seminar in Sociology (1 unit)  
SOC 70R Independent Study in Sociology (1 unit)  
SOC 71R Independent Study in Sociology (2 units)  
SOC 72R Independent Study in Sociology (3 units)  
SOC 73R Independent Study in Sociology (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

WMN 5 Introduction to Women's Studies (4 units)  
WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
or PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)

## ASSOCIATE DEGREE FOR TRANSFER-SOCIOLOGY

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- Students will be able to demonstrate a working knowledge of the core concepts of sociology: social structure, culture, social stratification and inequality, race, ethnicity, gender and globalization.
- Students will be able to apply their understanding of sociology to their professional, personal and civic lives.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (22-23 units)

SOC 1 Introduction to Sociology (5 units)  
or SOC 1H Honors Introduction to Sociology (5 units)

And select TWO courses each from List A and List B:

List A:

PSYC 7 Statistics for the Behavioral Sciences (5 units)  
or SOC 7 Statistics for the Behavioral Sciences (5 units)  
or MATH 10 Elementary Statistics (5 units)  
PSYC 10 Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)  
SOC 20 Major Social Problems (4 units)

List B:

MATH 10<sup>[35]</sup> Elementary Statistics (5 units)  
PSYC 10<sup>[35]</sup> Research Methods & Designs (5 units)  
or SOC 10 Research Methods & Designs (5 units)  
SOC 14 Sociology of Crime (4 units)  
SOC 20<sup>[35]</sup> Major Social Problems (4 units)  
SOC 23 Race & Ethnic Relations (4 units)  
SOC 28 Sociology of Gender (4 units)  
SOC 30 Social Psychology (4 units)  
or PSYC 30 Social Psychology (4 units)  
SOC 40 Aspects of Marriage & Family (4 units)

<sup>[35]</sup> May be used to satisfy List B if not completed as part of List A.

##### Support Courses: (4-5 units)

Select ONE course from the following:  
ANTH 2A Cultural Anthropology (4 units)  
or ANTH 2AH Honors Cultural Anthropology (4 units)  
ECON 25 The Global Economy (4 units)  
GEOG 2 Human Geography (4 units)  
PHIL 1 Critical Thinking & Writing (5 units)  
PSYC 1 General Psychology (5 units)  
or PSYC 1H Honors General Psychology (5 units)  
PSYC 49 Human Sexuality (4 units)

## SPANISH

### Program Type(s): Associate in Arts Degree

Units required for major: 27-30

#### PROGRAM LEARNING OUTCOMES

- The student will be able to communicate with native speakers of Spanish, using the appropriate language for any given situation.
- The student will, by presenting research, demonstrate knowledge of Hispanic society, culture, and politics.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (15-30 units)

SPAN 1 Elementary Spanish I (5 units)  
 SPAN 2 Elementary Spanish II (5 units)  
 SPAN 3 Elementary Spanish III (5 units)  
 SPAN 4 Intermediate Spanish I (5 units)  
 SPAN 5 Intermediate Spanish II (5 units)  
 SPAN 6 Intermediate Spanish III (5 units)

*Note: For students who can demonstrate proficiency equivalent to one year of college Spanish, SPAN 1, 2 and 3 may be waived. However, if you are waived out of SPAN 1-2-3 (15 units), you must take 12 units from the support courses below to satisfy the 27-unit core requirement.*

##### Support Courses: (0-12 units)

For students waived out of SPAN 1-2-3, select 12 units from the following<sup>[36]</sup>:

SPAN 10A Spanish for Heritage Speakers (5 units)  
 SPAN 13A Intermediate Conversation I (4 units)  
 SPAN 13B Intermediate Conversation II (4 units)  
 SPAN 14A Advanced Conversation I (4 units)  
 SPAN 14B Advanced Conversation II (4 units)  
 SPAN 25A Advanced Composition & Reading I (4 units)  
 SPAN 25B Advanced Composition & Reading II (4 units)

<sup>[36]</sup> Students completing the full core course sequence (SPAN 1-6) are not required to complete support courses for the degree.

## ASSOCIATE DEGREE FOR TRANSFER-SPANISH

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

#### PROGRAM LEARNING OUTCOMES

- The student will be able to communicate with native speakers of Spanish, using the appropriate language for any given situation.
- The student will, by presenting research, demonstrate knowledge of Hispanic society, culture, and politics.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (30 units)

Select ONE of the following options:

Option 1:

SPAN 1 Elementary Spanish I (5 units)  
 SPAN 2 Elementary Spanish II (5 units)  
 SPAN 3 Elementary Spanish III (5 units)

SPAN 4 Intermediate Spanish I (5 units)  
 SPAN 5 Intermediate Spanish II (5 units)  
 SPAN 6 Intermediate Spanish III (5 units)

Option 2:

SPAN 1 Elementary Spanish I (5 units)  
 SPAN 2 Elementary Spanish II (5 units)  
 SPAN 3 Elementary Spanish III (5 units)  
 SPAN 4 Intermediate Spanish I (5 units)  
 SPAN 6 Intermediate Spanish III (5 units)  
 SPAN 10A Spanish for Heritage Speakers (5 units)

##### Support Courses: (4 units)

ENGL 31 Latino/a Literature (4 units)  
 HIST 8 History of Latin America (4 units)  
 SPAN 25A Advanced Composition & Reading I (4 units)  
 SPAN 25B Advanced Composition & Reading II (4 units)

*Please Note: If the student places out of any course and is not awarded units for that course, the student will have to take additional units to compensate for the course/units needed to reach at least 27 total units in the major (per Title 5 regulations). Course substitutions are made at the discretion of the local college and may or may not be delineated in the local degree. Students should see a counselor for details.*

## SPORTS MEDICINE (FORMERLY ATHLETIC INJURY CARE)

### Program Type(s): Associate in Science Degree

Units required for major: 49

#### PROGRAM LEARNING OUTCOMES

- Students will demonstrate an entry-level of knowledge and skill in a variety of sports medicine disciplines, including athletic training, physical therapy, strength and conditioning and emergency medical care.
- Students will be able to provide quality medical care for Foothill College intercollegiate athletic teams.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (49 units)

BIOL 40A Human Anatomy & Physiology I (5 units)  
 BIOL 40B Human Anatomy & Physiology II (5 units)  
 BIOL 40C Human Anatomy & Physiology III (5 units)  
 CHEM 25 Fundamentals of Chemistry (5 units)  
 or CHEM 30A Survey of Inorganic & Organic Chemistry (5 units)  
 KINS 1 Introduction to Kinesiology (5 units)  
 KINS 16A Prevention of Athletic Injuries (3 units)  
 KINS 16B Emergency Athletic Injury Care (3 units)  
 KINS 16C Treatment & Rehabilitation of Athletic Injuries (3 units)  
 KINS 62A Clinical Experiences in Sports Medicine I (3 units)  
 KINS 62B Clinical Experiences in Sports Medicine II (3 units)  
 KINS 62C Clinical Experiences in Sports Medicine III (3 units)  
 KINS 62D Clinical Experiences in Sports Medicine IV (3 units)  
 KINS 62E Clinical Experiences in Sports Medicine V (3 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

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**Elective Courses: (Recommended units)**

These courses are recommended to fulfill the additional elective requirements to reach 90 units for the degree as they augment the major:

BIOL 45 Introduction to Human Nutrition (4 units)  
 CHEM 1A General Chemistry (5 units)  
 or CHEM 1AH Honors General Chemistry (5 units)  
 CHEM 1B General Chemistry (5 units)  
 or CHEM 1BH Honors General Chemistry (5 units)  
 CHEM 1C General Chemistry & Qualitative Analysis (5 units)  
 HLTH 21 Contemporary Health Concerns (4 units)  
 KINS 4 Concepts of Physical Fitness & Wellness (4 units)  
 KINS 15 First Aid & CPR/AED (1 unit)  
 KINS 65A PNF: Introduction to the Upper Extremity (3 units)  
 KINS 65B PNF: Introduction to the Lower Extremity (3 units)  
 MATH 10 Elementary Statistics (5 units)  
 PHYS 2A General Physics (5 units)  
 PHYS 2B General Physics (5 units)  
 PHYS 2C General Physics (5 units)  
 PSYC 1 General Psychology (5 units)  
 or PSYC 1H Honors General Psychology (5 units)

## ASSOCIATE DEGREE FOR TRANSFER-STUDIO ARTS

**Program Type(s): Associate in Arts for Transfer Degree**

Units required for major: 90

**PROGRAM LEARNING OUTCOMES**

- Graduates will be equipped with the fundamental formal two- and three-dimensional foundation-level technical skills, materials, concepts, and methods.
- Graduates will gain strong awareness of cultural art traditions through the examination and critical evaluation of culturally significant works of art.
- Graduates will be able to critique and analyze two- and three-dimensional creative projects using the current principles, theories and language of art and design.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (21 units)**

ART 2B History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 or ART 2BH Honors History of Western Art from the Middle Ages to the Renaissance (4.5 units)  
 ART 2C History of Western Art from the Baroque to Modernism (4.5 units)  
 ART 4A Fundamentals in Drawing (4 units)  
 ART 5A 2-D Foundations (4 units)  
 ART 5B 3-D Foundations (4 units)

**Support Courses: (16.5 units)**

Complete ONE course from List A:

List A:

ART 2A History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 or ART 2AH Honors History of Art: History of Western Art from Prehistory through Early Christianity (4.5 units)  
 ART 2F Introduction to Asian Art (4.5 units)

ART 3 History of Modern Art from Post-Impressionism to the Present (4.5 units)

And complete 12 units from three areas in List B:  
 List B:

Drawing Area:

ART 4B Intermediate Drawing (4 units)  
 and<sup>[37]</sup> ART 4C Representational Drawing (4 units)  
 ART 4D Figure Drawing I (4 units)  
 and<sup>[37]</sup> ART 4E Heads & Hands Drawing (4 units)

Painting Area:

ART 19A Oil Painting I (4 units)  
 or ART 19B Acrylic Painting I (4 units)  
 ART 19C Oil Painting II (4 units)

Color Area:

ART 20A Color I (4 units)  
 and<sup>[37]</sup> ART 20B Color II (4 units)

Ceramics Area:

ART 45A Beginning Ceramics Handbuilding (4 units)

Sculpture Area:

ART 5C Sculpture (4 units)  
 ART 44 Ceramic Sculpture (4 units)

Other Studio Arts Area:

ART 47A Watercolor I (4 units)  
 ART 47B Watercolor II (4 units)

Printmaking Area:

GID 38 Introduction to Printmaking (4 units)  
 or ART 40 Introduction to Printmaking (4 units)

Digital Art Area:

GID 41 Digital Art & Graphics (4 units)  
 or ART 14D Digital Art & Graphics (4 units)

Photography Area:

PHOT 1 Black & White Photography I (4 units)  
 or PHOT 5 Introduction to Photography (4 units)

<sup>[37]</sup> Both courses must be completed to fulfill the requirement.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## THEATRE ARTS

### Program Type(s): Associate in Arts Degree, Career Certificate [Non-Transcriptable]

Units required for major: 44-48, certificate: 26

#### PROGRAM LEARNING OUTCOMES

- Students will be able to proceed to further educational opportunities or entry-level workforce employment in their prescribed area of the performing arts with a minimal adjustment period.
- Students will be able to employ skill sets of collaboration relevant to multiple arenas of alliance or teamwork within the performing arts arena.

#### ASSOCIATE DEGREE REQUIREMENTS \*

##### Core Courses: (28-40 units)

THTR 1 Introduction to Theatre (4 units)

THTR 20A Acting I (4 units)

THTR 31 Management for the Theatre & Stage (4 units)

And select ONE of the following track options:

Option 1: General Theatre Studies (16 units)

THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

THTR 2B History of Dramatic Literature: Moliere to Modern (4 units)

or THTR 8 Multicultural Theatre Arts in Modern America (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 47A Introduction to Musical Theatre Production (6 units)

THTR 49A Performance Production I (6 units)

And 4 units from the following:

THTR 21A Scenery & Property Construction (4 units)

THTR 42 Introduction to Theatre Design (4 units)

Option 2: Acting Performance (28 units)

THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

THTR 40A Basic Theatrical Makeup (4 units)

THTR 48B Singing Technique for Musical Theatre (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 47A Introduction to Musical Theatre Production (6 units)

THTR 49A Performance Production I (6 units)

And 4 units from the following:

THTR 21A Scenery & Property Construction (4 units)

THTR 42 Introduction to Theatre Design (4 units)

Option 3: Musical Theatre Performance (25 units)

DANC 3A Beginning Jazz Dance (1 unit)

THTR 2F History of American Musical Theatre (4 units)

THTR 40A Basic Theatrical Makeup (4 units)

THTR 48B Singing Technique for Musical Theatre (4 units)

THTR 48C Musical Theatre Repertoire for Singers (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)

THTR 45E Technical Theatre Management in Production (6 units)

THTR 47A Introduction to Musical Theatre Production (6 units)

And 4 units from the following:

THTR 21A Scenery & Property Construction (4 units)

THTR 42 Introduction to Theatre Design (4 units)

##### Support Courses: (8-16 units)

For Option 1 (General Theatre Studies), select an additional 16 units from the following:

THTR 2F History of American Musical Theatre (4 units)

or THTR 12A Stage & Screen (4 units)

THTR 7 Introduction to Directing (4 units)

or THTR 43A Script Analysis (4 units)

THTR 20B Acting II (4 units)

or THTR 63A Film & Television Acting Workshop (4 units)

THTR 25 Introduction to Fashion & Costume Construction (4 units)

or THTR 40A Basic Theatrical Makeup (4 units)

THTR 43E Improvisation (4 units)

or THTR 48B Singing Technique for Musical Theatre (4 units)

For Option 2 (Acting Performance), select an additional 8 units from the following:

THTR 38D Stage Combat (2 units)

THTR 43A Script Analysis (4 units)

THTR 43C Foundations in Classical Acting (6 units)

THTR 43E Improvisation (4 units)

THTR 48A Vocal Production & Speech (4 units)

THTR 57 Actor Marketing Strategies (4 units)

THTR 63A Film & Television Acting Workshop (4 units)

For Option 3 (Musical Theatre Performance), select an additional 8 units from the following:

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

THTR 38D Stage Combat (2 units)

THTR 43A Script Analysis (4 units)

THTR 43E Improvisation (4 units)

##### Actor Career Certificate (26 units)

###### [Non-Transcriptable]

Select 26 units from the following:

THTR 7 Introduction to Directing (4 units)

THTR 20B Acting II (4 units)

THTR 20C Acting III (4 units)

THTR 38D Stage Combat (2 units)

THTR 43C Foundations in Classical Acting (6 units)

THTR 43E Improvisation (4 units)

THTR 48A Vocal Production & Speech (4 units)

THTR 57 Actor Marketing Strategies (4 units)

THTR 63A Film & Television Acting Workshop (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

## ASSOCIATE DEGREE FOR TRANSFER-THEATRE ARTS

### Program Type(s): Associate in Arts for Transfer Degree

Units required for major: 90

### PROGRAM LEARNING OUTCOMES

- Students will be able to proceed to further educational opportunities or entry-level workforce employment in their prescribed area of the performing arts with a minimal adjustment period.
- Students will be able to employ skill sets of collaboration relevant to multiple arenas of alliance or teamwork within the performing arts arena.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (12-14 units)

THTR 1 Introduction to Theatre (4 units)  
or THTR 2A History of Dramatic Literature: Classical to Moliere (4 units)

And select TWO courses from the following:

THTR 20A Acting I (4 units)  
THTR 49A Performance Production I (6 units)  
or THTR 45A Technical Theatre in Production I (4 units)  
or THTR 47A Introduction to Musical Theatre Production (6 units)

#### Support Courses: (16-18 units)

Select FOUR courses from the following:  
THTR 20B Acting II (4 units)  
THTR 21A Scenery & Property Construction (4 units)  
THTR 25 Introduction to Fashion & Costume Construction (4 units)  
THTR 27 Lighting Design & Technology (4 units)  
THTR 40A Basic Theatrical Makeup (4 units)  
THTR 43A Script Analysis (4 units)  
THTR 49A<sup>[38]</sup> Performance Production I (6 units)  
or THTR 45A<sup>[38]</sup> Technical Theatre in Production I (4 units)  
or THTR 47A<sup>[38]</sup> Introduction to Musical Theatre Production (6 units)

<sup>[38]</sup> If not used to satisfy the core course requirement.

## THEATRE TECHNOLOGY

### Program Type(s): Associate in Arts Degree, Certificate of Achievement, Career Certificate [Non-Transcriptable]

Units required for major: 44, certificate: 24-44

### PROGRAM LEARNING OUTCOMES

- Students will be able to explore further educational or workforce experience in technical theatre with a minimal fundamental adjustment period.
- Students will function effectively in a variety of roles within a collaborative technical theatre environment.
- Students will develop skills for evaluating their own and others' contributions to successful outcomes in technical theatre.

### ASSOCIATE DEGREE REQUIREMENTS \*

#### Core Courses: (32 units)

ART 4A Fundamentals in Drawing (4 units)  
GID 33 Graphic Design Studio I (4 units)  
THTR 1 Introduction to Theatre (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

or THTR 8 Multicultural Theatre Arts in Modern America (4 units)  
THTR 20A Acting I (4 units)  
THTR 21A Scenery & Property Construction (4 units)  
THTR 25 Introduction to Fashion & Costume Construction (4 units)  
or THTR 26 Introduction to Fashion History & Costume Design (4 units)  
THTR 31 Management for the Theatre & Stage (4 units)  
THTR 42 Introduction to Theatre Design (4 units)

#### Support Courses: (12 units)

Select 8 units from the following:  
MTEC 51A Studio Recording I (4 units)  
THTR 21B Intermediate Scenery & Property Construction (4 units)  
THTR 21C Advanced Scenery & Properties Construction (4 units)  
THTR 25B Fashion & Costume Construction II (4 units)  
THTR 27 Lighting Design & Technology (4 units)  
THTR 32 CAD Drafting for the Theatre, Film & Television (4 units)  
THTR 32A Advanced CAD Drafting for the Theatre, Film & Television (4 units)  
THTR 40A Basic Theatrical Makeup (4 units)  
THTR 43A Script Analysis (4 units)

And 4 units from the following:

THTR 45A Technical Theatre in Production I (4 units)  
THTR 45B Technical Theatre in Production II (4 units)  
THTR 45E Technical Theatre Management in Production (6 units)  
THTR 45F Technical Theatre Management in Production II (6 units)

#### Certificate of Achievement in Theatre Technology (44 units)

The certificate of achievement is awarded upon completion of the core and support courses. General education courses are not required.

#### Theatre Technology Career Certificate (24 units)

##### [Non-Transcriptable]

MTEC 51A Studio Recording I (4 units)  
THTR 21A Scenery & Property Construction (4 units)  
THTR 25 Introduction to Fashion & Costume Construction (4 units)  
THTR 27 Lighting Design & Technology (4 units)  
THTR 32 CAD Drafting for the Theatre, Film & Television (4 units)  
THTR 42 Introduction to Theatre Design (4 units)

#### Theatre Production Organization Career Certificate (24 units)

##### [Non-Transcriptable]

THTR 21A Scenery & Property Construction (4 units)  
THTR 31 Management for the Theatre & Stage (4 units)  
THTR 42 Introduction to Theatre Design (4 units)

And 12 units from the following:

THTR 45A Technical Theatre in Production I (4 units)  
THTR 45B Technical Theatre in Production II (4 units)  
THTR 45C Technical Theatre in Production III (4 units)  
THTR 45D Technical Theatre in Production IV (2 units)  
THTR 45E Technical Theatre Management in Production (6 units)  
THTR 45F Technical Theatre Management in Production II (6 units)

#### Theatre Costume and Makeup Career Certificate (24 units)

##### [Non-Transcriptable]

THTR 21A Scenery & Property Construction (4 units)  
THTR 25 Introduction to Fashion & Costume Construction (4 units)  
THTR 25B Fashion & Costume Construction II (4 units)  
THTR 40A Basic Theatrical Makeup (4 units)

And 8 units from the following:

THTR 45A Technical Theatre in Production I (4 units)  
 THTR 45B Technical Theatre in Production II (4 units)  
 THTR 45C Technical Theatre in Production III (4 units)  
 THTR 45D Technical Theatre in Production IV (2 units)  
 THTR 45E Technical Theatre Management in Production (6 units)  
 THTR 45F Technical Theatre Management in Production II (6 units)

## TRANSFER STUDIES—CSU GE

### Program Type(s): Certificate of Achievement

Units required for Certificate: 52

### Certificate of Achievement in Transfer Studies--CSU GE (52 Units)

#### AREA A: Communication in the English Language & Critical Thinking (minimum 12 units)

CSU admission requires completion of one course from each of the following areas: A1, A2 and A3.

A1. Oral Communication: COMM 1A, 1AH, 1B, 1BH, 2, 3, 4.  
 A2. Written Communication: ENGL 1A, 1AH, 1B, 1BH, ENGL 1S & 1T (if 1S & 1T are selected to satisfy this area, both 1S & 1T must be completed).  
 A3. Critical Thinking: ENGL 1B, 1BH, 1C, 1CH; PHIL 1, 7, 30.

#### AREA B: Natural Sciences & Mathematics (12-15 units)

Complete one course from category B1, B2, and B4. One Physical or Biological Science must include a laboratory experience (noted with asterisk).

B1. Physical Science: ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1AH\*, 1B\*, 1BH\*, 1C\*, 9\*, 12A, 12AL\*, 12B, 12BL\*, 12C, 12CL\*, 13AH\*, 13BH\*, 13CH\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*, 20; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12; PSE 20\*.  
 B2. Biological & Life Science: ANTH 1, 1H, 1HL\*, 1L\*, 13, 13L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.  
 B4. Mathematics/Quantitative Reasoning: (Completion of one course is required for CSU Admission) C S 18; MATH 1A, 1AH, 1B, 1BH, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 42, 44, 48A, 48B, 48C; PSYC 7; SOC 7.

#### AREA C: Arts, Literature, Philosophy & Foreign Language (12-15 units)

Completion of a minimum of three courses, to include at least one course from Arts and one course from Humanities.

NOTE: Students who did not complete ENGL 1B or 1BH for Area A3 above must complete ENGL 1B or 1BH as one of the Area C courses. Courses may not be counted in more than one area.

C1. Arts (Art, Dance, Music, Theater): ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 3, 4A, 6; DANC 10; ENGL 34C; MDIA 1, 1H, 2C, 3, 5, 6, 7; MUS 1, 2A, 2B, 2C, 2D, 2F, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11D, 11E; PHIL 11; PHOT 1, 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 20A, 26.

C2. Humanities (Literature, Philosophy, Foreign Languages): COMM 12; CRWR 6, 25A, 39A, 39B, 41A, 41B; ENGL 1B, 1BH, 5, 7, 8, 11, 11H, 12, 14, 16, 17, 18A, 22, 24, 31, 34C, 37, 40, 41, 43A, 43AH, 43B, 43BH, 45A, 45AH, 45B, 45BH, 47A, 47AH, 47B, 47BH, 49; HIST 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7, 7H, 9; JAPN 1, 2, 3, 4, 5, 6; MDIA 2A, 2B, 11, 11H, 12; PHIL 2, 4, 8, 12, 20A, 20B, 24, 25; SPAN 1, 2, 3, 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

#### AREA D: Social, Political & Economic Institutions (12-15 units)

Two CSU graduation requirements: minimum of three courses.

**Requirement 1:** Three courses, selected from Area D and including at least two different subject areas;

**Strongly Recommended:** POLI 1 and either HIST 17A, 17B, 17C, or 17CH (This satisfies the F1 CSU American Institutions Requirement which is required of all CSU graduates).

D. ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 16L, 17L, 20, 22, 52; ART 2E; CHLD 1, 2, 50A, 51A, 88; COMM 10, 12; ECON 1A, 1B, 9, 9H, 25; EDUC 2; ENGL 12, 22, 31; GEOG 2, 5, 10; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 17CH, 18, 19, 20; HLTH 20, 22, 23; JRNL 2; KINS 2, 10; MDIA 8A, 9, 13; MUS 8, 8H, 11F; PHIL 24, 25; PHOT 8, 8H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 1H, 4, 9, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40; SOSOC 1, 2, 20; SPED 1, 2; WMN 5, 11, 21.

#### AREA E: Lifelong Understanding & Self Development (4-5 units)

E. BIOL 8; CNSL 52, 72; CRLP 7; DANC 1A, 1B, 1C, 2A, 2B, 3A, 3B, 4A, 4B, 4C, 5, 6, 7, 8, 11A, 11B, 11C, 12A, 12B, 12C, 13A, 13B, 14, 18A, 18B (Note: DANC counts as PE Activity); HLTH 21, 23, 60; any ATHL, PHDA, PHED, Activity course (limited to 2 units); KINS 4, 9, 15; SOC 19, 40; SPED 1, 2.

Note: Courses completed for this certificate of achievement must be on the approved list during the year in which they were taken. Consult a Foothill College counselor for clarification.

## TRANSFER STUDIES—IGETC

### Program Type(s): Certificate of Achievement

Units required for Certificate: 48

### Certificate of Achievement in Transfer Studies--IGETC (48 Units)

#### AREA 1: English Communication (10-15 units)

**For UC:** Complete one course from Group A and one course from Group B.

**For CSU:** Complete one course from Group A, Group B and Group C.

Group A: English Composition: ENGL 1A or 1AH or 1S & 1T (if 1S & 1T are selected to satisfy this area, both 1S & 1T must be completed). (5 units)  
 Group B: Critical Thinking/English Composition: ENGL 1B, 1BH, 1C, 1CH; PHIL 1. (5 units)

Group C: Oral Communication (required for CSU only): COMM 1A, 1AH, 1B, 1BH, 2, 3, 4. (5 units)

#### AREA 2: Mathematical Concepts & Quantitative Reasoning (5 units)

Complete a minimum of one course.

C S 18; MATH 1A, 1AH, 1B, 1BH, 1C, 1D, 2A, 2B, 10, 11, 12, 17, 22, 44, 48C; PSYC 7; SOC 7.

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.



**AREA 3: Arts & Humanities (12–15 units)**

Complete at least three courses: one course from Arts and one course from Humanities, plus one additional course from either Arts or Humanities.

Arts: ART 1, 2A, 2AH, 2B, 2BH, 2C, 2E, 2F, 2J, 3; DANC 10; ENGL 34C; MDIA 1, 1H, 2A, 2B, 2C, 3, 5, 6, 7; MUS 1, 2A, 2B, 2C, 2D, 2F, 3A, 3B, 3C, 7, 7D, 7E, 7F, 8, 8H, 9A, 9B, 10, 11A, 11B, 11D, 11E; PHIL 11; PHOT 5, 8, 8H, 10, 10H, 11, 11H; THTR 1, 2A, 2B, 2F, 8, 12A, 26.

Humanities: CRWR 25A; ENGL 5, 7, 8, 11, 11H, 12, 14, 16, 17, 18A, 22, 24, 31, 34C, 37, 40, 41, 43A, 43AH, 43B, 43BH, 45A, 45AH, 45B, 45BH, 47A, 47AH, 47B, 47BH; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH; HUMN 1, 2, 3, 3H, 4, 4H, 5, 6, 7, 7H, 9; JAPN 4, 5, 6; MDIA 11, 11H, 12; PHIL 2, 4, 8, 12, 20A, 20B, 24, 25; SPAN 4, 5, 6, 10A, 25A, 25B; THTR 2A, 2B.

**AREA 4: Social & Behavioral Sciences (12-15 units)**

Complete at least three courses from two different subjects.

ANTH 2A, 2AH, 2B, 3, 4, 5, 6, 8, 12, 14, 15, 20, 22; ART 2E; CHLD 1, 2; COMM 10, 12; ECON 1A, 1B, 9, 9H, 25; EDUC 2; GEOG 2, 5, 10; HIST 3A, 3B, 3C, 4A, 4B, 4C, 4CH, 8, 9, 9H, 10, 16, 16H, 17A, 17B, 17C, 17CH, 18, 19, 20; HLTH 20, 22; JRNL 2; KINS 2, 10; MDIA 8A, 9, 13; MUS 11F; PHOT 8, 8H; POLI 1, 2, 2H, 3, 3H, 9, 9H, 15, 15H; PSYC 1, 1H, 4, 9, 10, 14, 21, 22, 25, 30, 33, 39, 40, 49; SOC 1, 1H, 8, 10, 11, 14, 15, 20, 23, 28, 30, 40; SOSOC 1, 2, 20; SPED 1, 2; WMN 5, 11, 21.

NOTE: American Institutions CSU Graduation Requirement:

For graduation from CSU, students must complete two courses in American history. The following Foothill courses may be used to satisfy this requirement. Students may complete these courses in partial fulfillment of Area 4 AND satisfy the American Institutions requirement. Students should complete POLI 1 and one of the following: HIST 17A, 17B, 17C, 17CH.

**AREA 5: Physical & Biological Sciences (9-12 units)**

Complete at least two courses: one Physical Science course and one Biological Science course; at least one must include a laboratory (noted with asterisk\*). NOTE: Either UC or CSU may limit credit (please see a Foothill College Counselor for clarification).

Physical Sciences: ASTR 10A, 10B, 10BH, 10L\*; CHEM 1A\*, 1AH\*, 1B\*, 1BH\*, 1C\*, 9\*, 12A, 12AL\*, 12B, 12BL\*, 12C, 12CL\*, 13AH\*, 13BH\*, 13CH\*, 20\*, 25\*, 30A\*, 30B\*; GEOG 1\*, 20; PHYS 2A\*, 2B\*, 2C\*, 4A\*, 4B\*, 4C\*, 4D\*, 6, 12; PSE 20\*.

Biological Sciences: ANTH 1, 1H, 1HL\*, 1L\*, 13, 13L\*; BIOL 1A\*, 1B\*, 1C\*, 1D, 9, 9L\*, 10\*, 12, 13\*, 14\*, 15\*, 40A\*, 40B\*, 40C\*, 41\*, 45; HORT 10\*.

**AREA 6: Language Other Than English (UC requirement only)**

Proficiency equivalent to two years of high school study in the same language with a grade of "C" or better or completion of one of the following courses. If Foothill College courses are not used to satisfy this requirement, students must provide official documentation of completion elsewhere: JAPN 2, 3, 4, 5, 6; SPAN 2, 3, 4, 5, 6, 10A.

Note: Courses completed for this certificate of achievement must be on the approved list during the year in which they were taken. Consult a Foothill College counselor for clarification.

**VETERINARY TECHNOLOGY****Program Type(s): Associate in Science Degree, Career Certificate [Non-Transcriptable]**

Units required for major: 90, certificate: 12.5

**PROGRAM LEARNING OUTCOMES**

- The student will demonstrate competency in the necessary knowledge, skills, and abilities required for the practice of veterinary technology in a wide scope of practice settings.
- The graduates will demonstrate entry-level clinical skills competency in accordance with accreditation requirements.

**ASSOCIATE DEGREE REQUIREMENTS \*****Core Courses: (90 units)****FIRST YEAR****Summer**

AHS 50A Introduction to Allied Health Programs (1.5 units)

**Fall**

V T 50A Current Topics in Veterinary Technology I (1 unit)

V T 53A Medical Terminology (2 units)

V T 54A Comparative Veterinary Anatomy & Physiology for the Veterinary Technician (5 units)

V T 55 Animal Management & Clinical Skills I (4 units)

V T 75A Animal Care Skills I (1 unit)

**Winter**

V T 50B Current Topics in Veterinary Technology II (1 unit)

V T 53B Medical Calculations (2 units)

V T 54B Comparative Veterinary Anatomy & Physiology for the Veterinary Technician (5 units)

V T 56 Animal Management & Clinical Skills II (4 units)

V T 60 Veterinary Office Practice (2 units)

V T 75B Animal Care Skills II (1 unit)

**Spring**

V T 50C Current Topics in Veterinary Technology III (1 unit)

V T 53C Introduction to Large Animal Care (2 units)

V T 75C Animal Care Skills III (1 unit)

V T 81 Clinical Pathology Methods (5 units)

V T 86 Laboratory Animal Technology (4 units)

V T 89 Clinical Internship I (3 units)

**SECOND YEAR****Fall**

V T 50D Current Topics in Veterinary Technology IV (1 unit)

V T 61 Animal Diseases (6 units)

V T 70 Fundamentals of Veterinary Diagnostic Imaging (4 units)

V T 87A Advanced Animal Care Skills I (1 unit)

V T 91 Clinical Internship II (3 units)

**Winter**

V T 50E Current Topics in Veterinary Technology V (1 unit)

V T 72 Principles of Veterinary Dentistry (2.5 units)

V T 83 Pharmacology for Technicians (4 units)

V T 85 Veterinary Emergency & Critical Care (4 units)

V T 87B Advanced Animal Care Skills II (1 unit)

V T 92 Clinical Internship III (3 units)

**Spring**

V T 50F Current Topics in Veterinary Technology VI (1 unit)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.

V T 66 Exotic Animal Care (2 units)  
 V T 84 Anesthesiology for Technicians (4 units)  
 V T 84L Veterinary Anesthesia Laboratory (2 units)  
 V T 93 Clinical Internship IV (3 units)  
 V T 95 Veterinary Technician Proficiency (2 units)

*Note: All courses must be taken in sequence and completed with a grade of "C" or better.*

**Online Veterinary Assisting Career Certificate (12.5 units)  
 [Non-Transcriptable]**

V T 52A Veterinary Assisting I (5 units)  
 V T 52B Veterinary Assisting II (5 units)  
 V T 88A Clinical Preceptorship I (2.5 units)

*Note: Student must have a high school diploma or a valid GED certificate and be able to read and write proficiently in English and perform mathematical computations at the high school graduate level.*

## WOMEN'S STUDIES

**Program Type(s): Associate in Arts Degree**

Units required for major: 32

**PROGRAM LEARNING OUTCOMES**

- The student will be able to identify connections between specific people, groups, events and ideas and larger sociological, psychological, historical and gender studies specific themes, developments and topics.
- The student will be able to critically analyze a variety of primary and secondary sources and draw valid sociological, psychological, historical, and gender studies interpretations from them.

**ASSOCIATE DEGREE REQUIREMENTS \***

**Core Courses: (16 units)**

SOC 28 Sociology of Gender (4 units)  
 WMN 5 Introduction to Women's Studies (4 units)  
 WMN 11 Women in Global Perspective (4 units)  
 WMN 21 Psychology of Women: Sex & Gender Differences (4 units)  
 or PSYC 21 Psychology of Women: Sex & Gender Differences (4 units)

**Support Courses: (16 units)**

Select 16 units from the following:  
 ART 2E A History of Women in Art (4.5 units)  
 COMM 10 Gender, Communication & Culture (5 units)  
 KINS 10 Women in Sports (5 units)  
 PSYC 14 Child & Adolescent Development (4 units)  
 PSYC 22 Psychology of Prejudice & Discrimination (4 units)  
 SOC 30 Social Psychology (4 units)  
 or PSYC 30 Social Psychology (4 units)  
 SOC 40 Aspects of Marriage & Family (4 units)  
 SOSOC 20 Cross-Cultural Perspectives for a Multicultural Society (4 units)  
 WMN 70R Independent Study in Women's Studies (1 unit)  
 WMN 71R Independent Study in Women's Studies (2 units)  
 WMN 72R Independent Study in Women's Studies (3 units)  
 WMN 73R Independent Study in Women's Studies (4 units)

\*A minimum of 90 units required for the A.A./A.S. degree, to include required courses, required electives and graduation requirements, as well as these minimum proficiencies: ENGL 1A or 1AH or 1S and 1T; MATH 17 or 105 or 108 or 180.

REV.